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Sketches at the Arts and Crafts Exhibition ..... *Double-Page Photo-Litho.*

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The Art Congress at Edinburgh.

THE second Congress of the National Association for the Advancement of Art has been, as far as it has extended at the moment of writing these words, quite as successful as that of Liverpool last year, in regard to the interest displayed in the meetings and in the subjects discussed; and perhaps more so in so far as the number of meetings and papers has been kept more within reasonable bounds, which was hardly the case at Liverpool, where there was too obvious an endeavour to dispose of all possible matters for discussion in the whole field of art at one swoop. It may also be said that on the whole the tendency of the papers read has been more practical and less imaginative and speculative. This is certainly the character of the two papers by Sir Jas. Gowans and Mr. Blashill, on the possible influence of municipal legislation on architecture, which we print in the present number; and it was equally the case with the admirable paper read by Mr. Rathbone at the same meeting, on "The Political Influence of Art," a paper really philosophic in spirit and concentrated and to the point in regard to matter and form. This we hope to be able to give entire in another number.

We fear it will be impossible to say that the presidential address on this occasion was in any way comparable to that remarkable though rather pessimist and satirical address which the audience listened to from the President of last year at Liverpool,—an address which sent a kind of thrill through the country, partly of sympathy with its eloquence and enthusiasm, partly of indignation (among those who are somewhat harshly termed "ordinary people") at the low estimate of English taste and knowledge of art formed and published by the President of the Royal Academy. Lord Lorne's presidential address will hardly arouse either enthusiasm or anger in any quarter. But it may claim also the credit of the generally practical character which we have noted in regard to other portions of the proceedings. Lord Lorne made a special point of justifying the holding of such meetings; a subject on which there is no doubt room for difference of opinion. Art is not talking, and some persons, both within and without the special circle of the art world, doubt whether Art Congresses can do any good. Lord Lorne's position was that the stress of modern life is so absorbing that people almost need to be laid hold of and their attention turned towards the value of art by special preaching on the subject; that a counterblast is required against the influence of the mere struggle for life and the utilitarian tendency of the day. There is certainly truth in this; and though we do not carry too far our belief in the efficacy of art-talks, the most critical auditor may allow that, while they may do good, it is not easy to see that they can do any harm to art. A good many who attend them may be led to think more and see more clearly on the subject of art than they have thought and seen before; and at the worst it is a pleasure to people who already care about the subject and have it at heart to discuss it with those who have a kindred interest. The argument that it is to our commercial interests as a nation to make our various productions good in form as well as in manufacture, which was again brought forward in the address, and which it has become the fashion to insist on lately, we make little account of. It is, in the first place, only another form of appeal to the merely commercial view of life which is so prevalent nowadays; a kind of attempt to persuade people that if you will only learn to be artistic you will find it pays to be so; a statement not untrue in itself, but very little to the point. Neither individuals nor nations will ever develop an artistic spirit under the influence of the desire to make money by it. As was said by one speaker in the course of the debate in the Architecture Section, one of the most baleful influences on modern street architecture is the desire to make a paying property on the shortest possible notice; to throw together any design which will just pass the authorities, to rush the building up by night and day, working by relays of men, in order to commence at the earliest possible moment the gathering in of the harvest of rentals, in which the so-called "architect" is often himself one of the speculators. There can never be good or noble architecture where the main object is to run up buildings as quickly as possible, to catch the money. What is wanted is that people should regard architectural beauty as a thing worth having in itself, and worth foregoing a little immediate gain for. And so in regard to all other branches of art. What we want is that people should take interest in the fashioning of whatever they make, take a pleasure in making it as beautifully as possible, because they enjoy doing so; not because it is better for the trade interests of the country: and we rather hope that this commercial argument will not be further paraded at any Art-Congress. It is essentially a false and deceptive view of the subject; a doctrine which, so to speak, cuts its own throat. The very fact of looking to artistic production as a matter of national commercial value in itself kills the very spirit which goes to produce artistic work—the love of the work for its own sake.

In regard to the important question of legislation in reference to architecture in cities, it will be seen that the two papers by the official architectural authorities of Edinburgh and London respectively come very fitly side by side, as each supplying one portion of the subject, Sir James Gowans's paper being to a great extent historical, and Mr. Blashill's critical; though Sir James Gowans closes with some definite and rather extensive, not to say alarming suggestions, in regard to a proposed board of architectural control: alarming because, after all, taste cannot be controlled or induced by legislation, and it seems absolutely certain that the influence of any such Board, however enlightened and cultured its members might be, must inevitably be (if it can get its own way) to stereotype a certain type of architecture as long as the same Board is in power, and, as Dr. Rowand Anderson observed in the course of the discussion, to "destroy architectural liberty." Those who read Mr. Blashill's paper, in which his reasoning on the subject, drawn from his own experience, is given with a pleasant sub-acid flavour of dry humour, will see that he, on the whole, sums up in favour of as much as possible of the let-alone principle. He has been accused, he says, of having allowed most horrible buildings to be erected; but he has refused various designs one after another, and what can be said if the unfortunate architect cannot produce anything better? It would be very difficult to get any authority to agree to stopping a building altogether on that ground; and after all, as Mr. Blashill says, are we sure that we are not strangling a new style in its infancy? This feeling in favour of a policy of non-intervention (at least as far as *active* interference is concerned) seemed to be the prevalent one among those who discussed the subject; and what the possible consequences

of a committee of taste might be was amusingly illustrated by one speaker, an amateur, who complained of the erection of a building in Princes-street by one of the more gifted Edinburgh architects of the day, Mr. Blanc, because it was in a style which did not please him (the speaker), and which he could not pigeon-hole satisfactorily under any recognised architectural nomenclature. This is exactly the kind of thing we should have if there were a Committee of Taste with despotic powers. We should be inclined to suggest, however, in regard to a merely preventive or prohibitive legislation,—as in Mr. Blashill's case of the man who had submitted four designs and was at length passed, apparently, because the authority had not patience to see any more designs,—that in such a case, where a man's plans were right but he showed himself unable to produce a decent design (and there are limits beyond which there can be no difference of opinion in regard to this), he should be told plainly that he must get a more competent architect to design a front, if he cannot himself produce one which is not a disgrace to the street. It would be a practical lesson which might have its good effects.

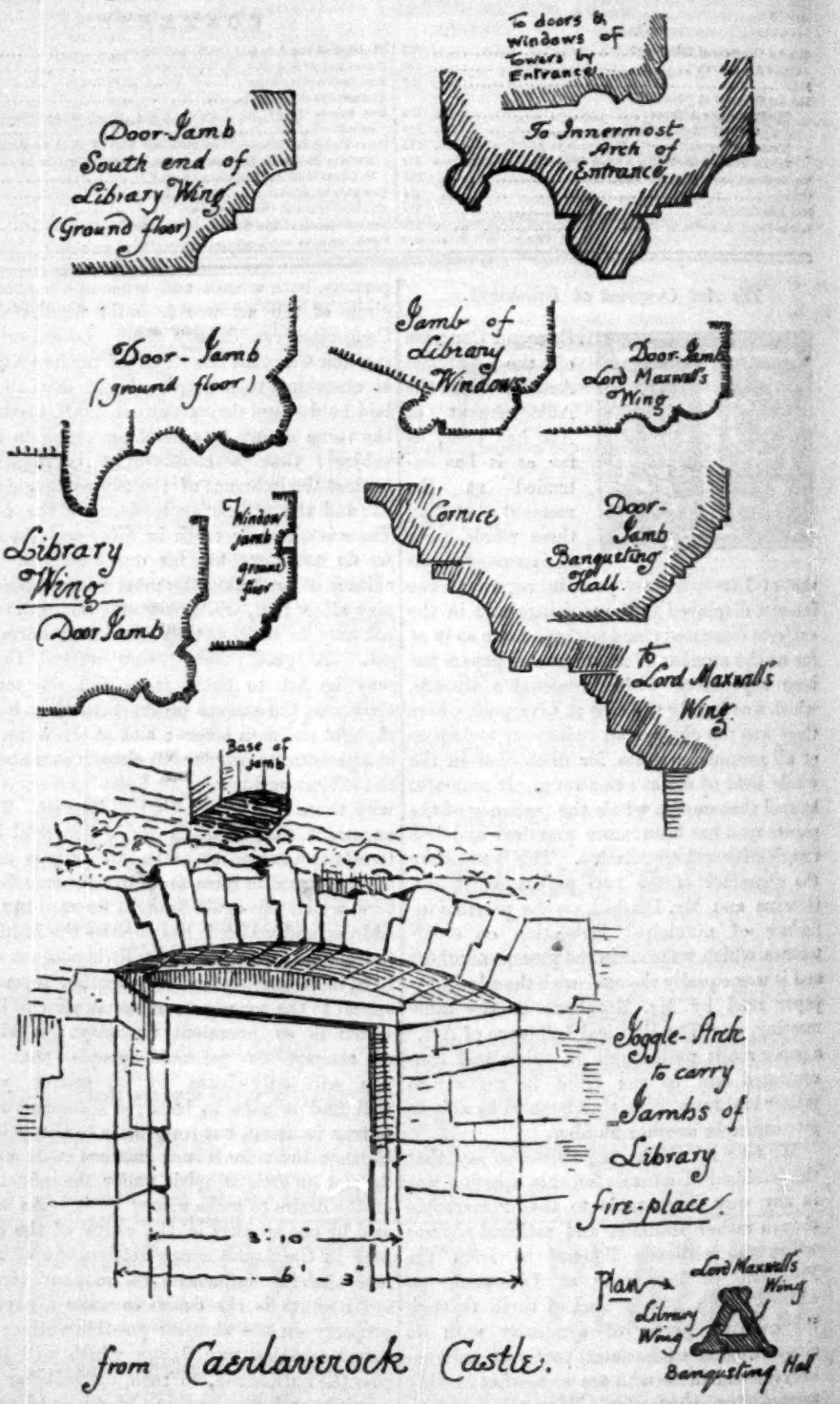
Mr. Mullins struck a very good note in his paper on "The Use and Decoration of Public Buildings," in regard to the desirability of having the sculptural decoration considered in conjunction with the architectural design from the first, so that it should appear as designed for the situation and not as an afterthought. This is a matter of immense importance both for the sculpture and the architecture, if they are to form one artistic whole.

Among the addresses delivered in the early part of the Congress one of the best and most noteworthy was certainly that delivered by Mr. Briton Rivière as President of the Section of Painting; an essay containing some very true thoughts upon the meaning and aims of painting, put into clear, terse, and forcible language. There is much more matter for comment and record in regard to the Congress, which we shall return to; deferring further remarks at present because it is no compliment to papers containing real and valuable thought to discuss them hurriedly and on the spur of the moment.

ACROSS SOLWAY FIRTH.

Up here, on Criffel, a fine expanse of country is displayed. On two sides great giants of hills keep watch and ward, shrouded in gloom and mist. To the south lies the shining Solway, and beyond it that mass of clouds shows where the Cumberland mountains are; while in yonder distance is the border town of Carlisle, with its mutilated Cathedral and its castle looking out across a wide, open space called the "Sauceries" towards the mountain where we sit. In front of us, at our feet, through a great expanse of mud, the once beautiful Nith crawls to the sea. Over yonder ridge lies Dumfries, and a mile or so above it is the Abbey of Lincluden, among tree-clad mounds, where the Chiden joins the Nith. Close beneath us is the larger Abbey called, after the heart of John Balliol preserved there by his widow, Sweet-Heart Abbey. That grove of trees beyond the flat muddy stretches of the Nith encloses Caerlaverock Castle. You can just see the walls and towers, grey among the green. Let us visit them,—the two abbeys and the castle,—and see what sort of men the Scotch were. Let us clamber down out of this cold wind, over the bogs and the rocks, and through the fern and the juniper bushes, past the little loch, and so to Sweet-Heart Abbey.

It is not a large place, but the work is good. There is no elaboration; all is simple and Early in style. It is sadly ruined—only the two chapels on the west of the south transept have their groined roofs left. Of the rest, walls and piers remain, except that a large part of the north wall of the north aisle has disappeared, and has been replaced by a dry stone fence to keep out intruders. Six bays made the nave, which had aisles. The transepts had an aisle of two bays,—or better, perhaps, they had each two chapels to the east. The choir had no aisles. At the crossing there was a tower, not very lofty. It never was a large place, particularly for an Abbey church; many a parish church in England is larger; it never played a prominent part in history, and now that "Time's fell hand," and the still more cruel hand of man, have played such havoc with it, it has passed from the memory of all but local pic-nic parties, who seem to come here in large numbers. Perhaps its decay may be partly owing to the fact that the walls are built with a core of boulders from the hill-side, faced with wrought stone, which has parted from the unbonded core in many places. The detail is good, but not elaborate nor startling. The finest features are the clearstory windows of the nave, which, in addition to the window itself, have an arcade of three arches on pretty little shafts, on the inside face of the wall. The fine rose window of the south transept is curiously designed to be cut into by the roof of some adjacent buildings, of which only the foundations are left. There are indications of a cloister,—and that is all of Sweet-Heart Abbey. The heart that gave it its name has long disappeared,—no one knows whither: so has the tomb of its foundress, Devorgilla Balliol, wife of John Balliol, whose memory and name, however, are perpetuated in Balliol College at Oxford. The situation chosen for the Abbey was such as the old monks loved, in a quiet valley by a winding stream; and, as one sits up here on Criffel, one wonders in what light they used to regard this great hill. Probably with more of awe than affection; and it is much to be doubted whether any of them, even the most active, clambered up here for the mere pleasure of the thing, and the extensive view,—for love of natural scenery was a passion but little cultivated in those days.



from Caerlaverock Castle.

Lincluden Abbey was even smaller than Sweet-Heart Abbey. The length of the nave was but about 60 ft.; but it is all gone now except a few windows, the foundations, and the old stone floor. The roofless chancel remains, cut off from the nave by a rood-screen of stone, in the cornice of which are carvings representing scenes from the life of Christ. The work generally is of Decorated character, and a beautiful tomb of the

Countess of Douglas, who died about 1430, together with the adjacent door to the sacristy, form a very interesting and effective group. There is a good deal of heraldic carving on the tomb, the door, the roof corbels, and other places, amongst which the three chalices and the heart of the Douglases frequently occur. It would be a labour of love on a summer's day to decipher these devices and the few inscriptions that are still legible. Adjoining the church are the remains of what is called the Provost's house, but most of the wrought features have disappeared, and little besides crumbling, but picturesque, walls remain. The situation is beautiful, washed as the site is on three sides by the irregular streams of the Cluden and Nith; while an ancient earthwork, round which the nuns (for the place was originally a Priory for Benedictine nuns) had made paths for their delectation, adds much to the interest of the surroundings. A century ago these ruins were a favourite haunt of Burns, who has apostrophised them in the lines beginning—

> "Ye holy walls, that still sublime
> Resist the crumbling touch of Time."

Much must have crumbled since Burns's day; but the place is well cared for now, and is surrounded by an iron railing, which not only serves to keep human intruders out (unless furnished with a proper "open, sesame"), but also the cattle, who regard ancient abbeys as scratching-posts of an extensive and convenient kind.

On the opposite side of Dumfries from Lincluden, and some seven miles out, is the castle we saw from Criffel,—Caerlaverock. It is an old foundation, since it is on record that it was besieged in 1300 by Edward I., and was described by one who was present as being in figure like a shield of three sides. It is, in fact, a triangle on plan, having a tower at two angles and a double tower at the apex. This was the original disposition, which has been retained all through, but the structure has undergone many alterations since it was besieged by Edward. These have consisted chiefly of the re-modelling of the interior. Of the buildings which line the three original walls of enceinte, two wings remain; one dates from early in the sixteenth century; the other from about a century later, being the work of Robert, Lord Maxwell, who was created Earl of Nithsdale in 1620. As the initials R. N. occur on his work, it must have been built somewhat later than that date. The third wing, which contained the Banqueting Hall, is in ruins. This is the building from which Scott drew his Ellangowan Castle in "Guy Mannering," but whereas that was situated on a rocky shore, this just lies above the flat stretches of mud covered by the Solway.

There is a good deal of interest about the plan. Its triangular shape is curious, the arrangements for strengthening and defending the entrance, which leads under an irregular archway, more than 40 ft. long, are very elaborate, while the sixteenth century library, and Lord Maxwell's Banqueting Hall were, the one a spacious, the other a magnificent, apartment. But there is not about Caerlaverock that essentially Scotch flavour which distinguishes the smaller castles or strongholds of the neighbourhood, and separates them completely from anything south of the Border country. One of these may be seen in Comlongon, some three miles off, across the marshy plain. That is native to the soil. Caerlaverock belongs to a more general type, and has, moreover, been subjected to foreign influences.

The mouldings here reproduced show the sequence of dates in the work. Some of them are rather quaint in their effect, but those of the latest period (Lord Maxwell's wing) are, like most Scotch Renaissance work, coarse and clumsy. The carving with which Lord Maxwell adorned his pediments is not much more refined. It is somewhat damaged, especially in its inscriptions, and evidently no authoritative interpretation has been promulgated lately; for the caretaker points out one panel as Prometheus bound, and the next, which probably represents Neptune, he calls Pharaoh crossing the Red Sea. Another is described as Peter and "John our Apostle" walking on the sea. This event, he says, may be found related in the Scriptures, but as there are three figures, two of whom are winged, and one, moreover, armed with a quiver, it is more likely that the subject is a classical one in which Amor plays a part, especially as the remains of the inscription run thus: NON AMAT ISTE SED . . . . AMAT AMOR. Another panel is, with equal probability, said to be Solomon returning the celebrated child unharmed to its mother, but it is difficult to decipher the actual meaning. Other pediments contain heraldic devices, and on one or two are the letters, R. N. and E. R. N., for Robert Nithsdale and Elizabeth his wife. We also give a sketch of an early example of a joggle-arch, which was rendered necessary by the library fireplace coming immediately over it.

On another occasion we may perhaps look into one or two of the Border Castles or Peels, and obtain a glimpse into the curious life of which they speak with such grim eloquence. In the meantime we must return to Dumfries. Along the road which runs a few feet up the side of the hill, giving a wide view over the marshy plain, where the sea-gulls hover in flocks and dart down on to the newly-turned earth close behind the ploughman's heels; past the hamlet of Bankend and its ruined Peel dated 1622; up the long hill, across which the rain sweeps unchecked; and then at last down to Dumfries where Burns died, and where his bones lie.

NOTES.

LORD BALFOUR OF BURLEIGH and Mr. Courtenay Boyle are now in the midst of the inquiry into the railway companies' rate proposals and the objections made thereto. Lord Balfour remarked at the outset that it was very desirable that objectors should not confine themselves to destructive criticism upon the proposals, but should formulate constructive propositions on their own part. In all probability nine out of ten objectors will be unable fully to carry out this suggestion. While they protest,—and in plenty of cases with justice,—that the proposals submitted are unreasonable, there are but few alternative propositions which will, upon examination, be found practicable. In a great many instances, however, the objections are only "destructive" to the extent of complaining that certain articles are placed in too high a class, and if they were lowered these would be withdrawn. Indeed, Mr. Pope made a statement on behalf of the railway companies which will, perhaps, cause the withdrawal of much opposition. It appears that a revised classification has been agreed upon as the result of the recent negotiations, and in this we hope it will be found that some of the counter proposals of the traders have been adopted. The counsel for the railway companies reiterated the statement that they have not the slightest desire to take any advantage of the traders, and that the Board of Trade is called upon to decide as to reserve powers, and not as to the actual operating rates. There is no doubt that some objectors have been confused as to the real issue, and that arguments which they have prepared in support of their protests may be beside the mark. At the same time, there are objections for which there is much to be said, such as those relating to "terminals," upon which the railway advocates have now stated their case. No fresh arguments were advanced, but Mr. Balfour Brown elicited an explanation of the principle upon which the proposed terminal charges are based. According to Mr. Pope, the average cost to the railway companies of the services mentioned has been ascertained, and this, *plus* a reasonable trade profit, is the suggested maximum.

IN commenting the other day on the conditions and instructions to architects in regard to the competition for the Sheffield Municipal Buildings, which we characterised as eminently satisfactory, we omitted to mention one feature in the conditions which is, we believe, entirely new, and which is a rather important innovation in the management of large architectural competitions. This is, that there are not even to be anonymous mottoes employed; no mark or sign of any kind is to be put upon the drawings: each set is to be accompanied by a sealed envelope also without mark or sign, and drawings and envelopes will have a distinguishing mark put on them by the official hand when opened. This is a very important innovation. There will thus be no possibility for that marvellous leaking out of the authorship of drawings which is known sometimes to occur when the author has friends at court, and when a hint can be conveyed what motto to look after. The official authorities at Sheffield have been liberal in answering questions, more than one hundred and twenty of which have been numbered and printed, and circulated among competitors, with their corresponding replies in another column. Many of the questions, we are bound to say, are needless and trivial, and look as if some competitors expected the Sheffield Corporation not only to receive plans from them, but to give instruction in planning and architectural treatment, which is certainly beyond their *métier*. Numerous also are the demands as to whether an alternative plan may not after all be sent in; whether two members of a firm may not send in two separate designs, &c.; all which queries, we are glad to see, are met with a curt "No." One simple-minded competitor inquires, "What is the price of bricks delivered on the ground?" to which the official response is, "It depends on the bricks": an answer in which the official intellect certainly "scores," whether the humour of it is intentional or not.

IN the course of the proceedings of the London County Council at their meeting on Tuesday last, there arose a discussion of the greatest moment to Londoners, although it is reported very meagrely in most of the daily papers, and is not even alluded to in the *Times* report. The discussion was one arising out of two motions standing in the name of Mr. Holmes, relating to the grievous injury arising from what may almost be called periodic sewer-floodings in the metropolis, especially in low-lying parts of Hackney and some other neighbourhoods. The possibility of a recurrence of these floodings, which seem to be the almost inevitable result of heavy rainfalls, fills the inhabitants with alarm, not only on account of the nuisance they entail and the damage they do before the waters subside, but on sanitary grounds, for basements periodically flooded with sewage are, to put it negatively, not likely to be conducive to immunity from epidemic disease. Mr. Holmes, and many who spoke in support of his motions (one of which was carried and the other withdrawn), aimed at what may be called local remedies or applications in the treatment of a disease which some of the doctors (if we may so designate Mr. Rhodes, the Chairman of the Main Drainage Committee, Mr. Æneas Smith, and Mr. Hunter,—both of the last-named being engineers, and members of the Main Drainage Committee) seem to think there is only too much reason to fear is constitutional, and not local. In other words, the opinion seems to prevail, in quarters which should be well-informed, that our costly metropolitan main-drainage system is already proving to be inadequate, owing to the growth of the metropolis. It is even suggested that the only possible remedy is to adopt, wholly or partially, the "separate" system,—*i.e.*, one system of sewers for surface drainage and another set of sewers for sewage proper,—at a cost of millions of money. The whole question, we are assured, will be brought before the Council as speedily as possible, but in a matter of this magnitude and importance it is well to proceed warily. It is announced that the recently-appointed Engineer to the Council, Mr. Joseph Gordon, is devoting pretty well the whole of his time

and energies to a careful investigation of the subject, with a view of reporting to the Main Drainage Committee, who will then bring the whole matter before the Council.

THE last number of the "Quarterly Journal" of the Palestine Exploration Fund contains some interesting details, with a plan, of the discovery of the remains of an ancient church near the street Tarib Sitti Maryam in Jerusalem. The walls remain up to about 5 ft. above the ground, indicating a short square Byzantine type of church about 40 ft. long, with a central and two side apses at the east end, and indications of four central piers. A plan is given of the Mount of Olives, and of a series of Christian burial-places in catacombs recently discovered on the hill. "Recent discoveries in Galilee" is illustrated by an engraving of a curious early Christian rock-cut tomb entrance at Shefa 'Amr, with a decorative horseshoe wall-arch encircling the opening of the tomb (which is itself square), with a broad band of carving showing vine foliage and a great circular patera at the crown of the arch. In the spandrel between the wall-arch and the square door a cross is carved in relief in the centre, with two birds (doves?), one at either side. The side of the passage approaching the tomb is also carved with a kind of semi-classic frieze of masks and animals, with a *guilloche* ornament running underneath. The whole is about as curious a relic of early Christian decorative art as could well be seen.

THE charming little book of sketches by the late Mr. C. R. Pink, issued to the subscribers who have contributed to erect a brass to his memory, is in itself one of the fittest of memorials to a man who was every inch an architect. The book, we are told in the preface, is like in form to the books in which the original sketches were made, and, we take it, represents pretty closely one of those books when it had been filled up. If this is so, Mr. Pink was an ideal architectural sketcher, whose wide sympathies and ready pencil led him to jot down whatever he saw that was notable or beautiful, or that might be useful to him, in a workmanlike way, for his own pleasure or benefit, though at the same time with a skill and knowledge that would have justified a more ambitious purpose. There are a few perspective sketches in the book, but the space is chiefly occupied by notes of details, separate features, bits of carving, mouldings, and scraps of heraldry,—which was always Mr. Pink's hobby. Almost all the sketches are accompanied by just such useful notes of dimensions, material, colour, and so on as supply the complement of information which the sketch could not convey, and in both sketches and notes the prominent and essential features are emphasised and insisted upon with the skill and knowledge only possible to the expert and earnest student who has no time to waste on non-essentials.

A FACTORY chimney, said to be the highest in the world, is now being erected at the Royal Smelting Works, near Freiberg, in Saxony. The horizontal flue from the works to the chimney is 1,093 yards long; it crosses the river Mulde, and then takes an upward course of 197 ft. to the top of the hill, upon which the chimney is being built. The base of the structure is 39 ft. square by 30 ft. in height, on which is placed a short octagonal transition, from which the round shaft starts. This is 430 ft. high, or, together with the base, 460 ft. high, with an inside diameter of 23 ft. at the bottom, and 16 ft. 6 in. at the top. It will take a million and a half bricks, and the cost is 6,000*l*. Mr. H. R. Heinicke, of Chemnitz, in Saxony, is the architect.

"THE Sanitary Chronicles of the Parish of St. Marylebone," during August and September, 1889, by Dr. Alexander Wynter Blyth, Medical Officer of Health (printed by order of the Vestry), record a great deal of useful work done, and include detailed statistics of mortality and disease. Among the sanitary Acts affecting the parish (in common with other metropolitan parishes) passed during last session was the Poor Law Act, 1889, which enables the Asylum Board to admit any person who is not a pauper, who is reasonably believed to be suffering from fever, small-pox, or diphtheria, into one of the Asylum hospitals. The expenses are to be paid by the Guardians of the Union from which he is received, the amount being recoverable by the Guardians from the person so admitted, or "from any person liable by law to maintain him." But a more important Act, which affects the whole of the Metropolis, is the Infectious Disease (Notification) Act, 1889, for on the occurrence in his household of any case of "small-pox, cholera, diphtheria, membranous croup, erysipelas, the disease known as scarlatina or scarlet-fever, and the fevers known by the following names,—typhus, typhoid, enteric, relapsing, continued, or puerperal fever," the householder is bound to give notice to the Medical Officer of Health, under a penalty for neglect of a fine not exceeding 40s. There are also clauses compelling medical practitioners to notify the same diseases. The Act became enforceable on and from Thursday last, October 31st, and it will no doubt soon be possible, as Dr. Wynter Blyth remarks, to form a fairly accurate estimate of the number of cases of infectious disease occurring in the metropolis.

THE report by Dr. Parsons to the Local Government Board on the condition of the Blackburn Rural Sanitary District draws attention chiefly to defects arising from bad building, imperfectly-constructed drains, and wells placed in situations where impure matter must percolate into them. The report says:—

"In the older houses of the district insufficient ventilation is a common defect; many of the windows are not made to open, and of many others only a single small pane can be opened. Almost all houses in the district have doors and windows at the back, as well as at the front. One or two cellar dwellings were seen, which were damp and ill-ventilated. The Rural Sanitary Authority have no urban powers or bylaws to regulate the erection of new buildings. A good many new houses have been built of late years in the township of Livesey, on the border of the borough of Blackburn, and also in Billington township. In some of the newly-built houses the need for regulations to secure a healthy construction was exemplified. Thus, at Livesey, a row of houses is built on the edge of a clay-pit which is in course of being filled up with ashes and house refuse, and some of the houses are stated to be actually built on such refuse. The ground under new houses is not cemented, nor is any waterproof course inserted in the walls to prevent damp rising in them. The drains of some new houses were seen to be laid with open joints, not properly luted with cement or otherwise.

"The ground around houses was frequently found in an uncleanly condition. There are some filthy unrepaired private streets. The back yards, and the back streets by which they are approached, are commonly unpaved, and in many cases were found strewn with ashes, shells, and other refuse and filth.

"No sewers have been constructed by the Rural Sanitary Authority, except that some irrigation works for the disposal of the sewage from certain houses at Tockholes have been constructed by the Authority jointly with the Over Darwen Corporation in order to avoid the contamination of a reservoir belonging to the latter. Each row of houses in the district is, however, usually furnished with a common drain or sewer, which discharges into the nearest ditch or stream, into a cesspool, or upon the surface of the ground. Nuisances arising from the want of proper sewers, and the consequent accumulation of stagnant sewage in pools or ditches near houses, were observed at many places in the district, *e.g.*, at Livesey, Wilpshire, Billington, and Mellor. The house-drains are in some cases of imperfect construction, as stone "soughs," or rows of common field-pipes, with rough untrapped inlets. Each house has usually a slopestone indoors; the pipe is made to discharge in the open air, but is usually untrapped, and is in some cases in such close relation with the drain that foul air from the latter, only slightly diluted with external air, can come up through the pipe into the house."

THE East Barnet Valley Local Board have sent out an interesting circular of particulars to architects proposing to compete for their new Public Offices. The cost of the buildings, including roads, fences and gates, &c., is not to exceed 3,000*l*. An architect who had obtained the particulars with a view to competing writes:—"Taking the areas of rooms given at 10 ft. high only, it gives 733*l*. at a penny per cubic foot; say 6d. (the lowest possible), 4,398*l*." The Board, we are told, "will act as assessors in the selection." "All designs must be accompanied by specifications of work to be executed." One design only will be selected, and "will be paid for according to the scale of charges authorised by the Institute of British Architects." This design, however, it is elsewhere rather inconsistently stated, "will become the property of the Board." The Board, however, "do not bind themselves to accept any design, nor do they undertake to employ the architect of the selected design to carry out the works." No premium is offered. Apparently all the Board "undertake to do" is to get plans from architects for nothing, for a building which could not possibly be erected for the sum named. What kind of "harchitecks" do they expect will respond to such a proposition?

THE ART CONGRESS AT EDINBURGH.

THE National Association for the Advancement of Art and its Application to Industry held the opening meeting of its second Congress on Monday evening, in Edinburgh.

The President's Address.

The President, the Marquis of Lorne, in his opening address, said:—The last congress was held at Liverpool, and constituted the first meeting of the kind. Some wonder was expressed that we should think it necessary to have such an assemblage. Was it needed, it was asked, in this most civilised country, at a time when pictures realise high prices, and when the whole aspect of our streets is being improved by the erection of buildings which, in comparison with those they replace, are seemly and often handsome,—was it needed that we should have congresses of artists as incentives to the proper appreciation of art, when the great nations of antiquity had no such organisation? Greece, whose voyagers discovered Britain: Rome, whose legions conquered and colonised it, had no such expedients to push their arts, which sprung spontaneously from their people's taste, as the flowers now rise from the crevices of their walls, to be taken as relics by the descendants of those Britons the builders found and vanquished. The answer must be that the stress of modern life is so much greater than of old, the number of mouths requiring food in given limited areas is so great, that, in the haste to supply wants, necessaries for the body are apt to be only considered, and there is little need to attract by grace or form where the desire is paramount for the appeasement of appetite. We multiply faster than did the ancient nations. We push each other into the sea and across it, and build up other peoples, who by their invention and skill make yet narrower in the world's markets the room that our people may hope to find. Besides these rivals of young blood and of our own veins, we have our old competitors on the Continent, those ancient antagonists whom century after century we have met in war, and now have to strive against in the more peaceful but hardly less vital occupations of peace. We desire among a practical people to show that it is that people's interest to make their work good in form as in stability, to clothe with the best combination of colours or patterns, brought, if necessary, from abroad if we cannot produce them here, the sturdy handiwork in which they excel all others, so that grace and force shall go hand in hand, helping each other to attract customers in the world's mart. We must not forget that, although we justly pride ourselves on the durability of our manufactures, the French and Germans are treading in this also close upon our heels. The cannon of Krupp have excelled ours in the durability of heavy ordnance, and France is building vessels near Marseilles which are as fast as those of our mercantile service, and have characteristics which make them quite as desirable for passengers as those of our great navigation companies. It is no time for us to be too self-satisfied. Look how our neighbours believe in the efficacy of art as a handmaid to labour. The art schools of Paris are of two classes, those intended to educate painters,

sculptors, and architects, and those intended for artisans employed in the decorative arts, masons, potters, iron and bronze workers, cabinet-makers, house-painters, paper-stainers, weavers, and others. The first school, the École des Beaux-Arts, is the national art school under Government. It is not intended for artisans, but only for those who intend to practise the highest branches of art—namely, architecture, painting, and sculpture. Of the second class—the schools intended to train artisans for more or less decorative employments—some are maintained by Government, some by the Municipality of Paris, and all are free. Paris allocated in 1885 upwards of 40,000*l.* to instruction in drawing and modelling alone, and has five evening schools for artisans, with 450 pupils on the roll. Besides this, the Municipality has drawing taught in all the primary schools. There is also a preparatory school of practical drawing, and a school for the application of art to industrial purposes. For these purposes the City Council gave even more than they were asked to supply, and granted 42,000*l.* This is so important that I must quote further. "The method of instruction appears admirably adapted to train up an intelligent class of artisans." A thorough appreciation of the general principle underlying all the arts is inculcated, a thorough control of the tools, and a knowledge of materials and their special adaptability to the various purposes; but not least in weight there is encouragement to original design and composition, which avoids the exasperating sameness so often seen in our schools of art. For this purpose the variety of model, drawn from all available sources, is an essential condition. The monthly competitions are also invaluable. They insure that so soon as a pupil has mastered one branch of instruction, no time shall be lost in moving him to another. They keep up also a constant and living interest in the progress of education. A certain stated time is given, which concentrates the student's attention and prevents him from dreaming and dawdling. The Municipality spend very large sums yearly in decorating their public buildings by historical and national pictures. It is remarkable that through all the vicissitudes of the later history of France, when the people have indeed taken up far too many different models to encourage the art of government,—that through all the changes, the love for art, and the practice of its encouragement by the State, has been the only abiding institution among them. Witness, for instance, the manufacture of the Gobelin tapestry, which each Government has continued, not for purposes of sale, but as a monopoly secured to the nation for enrichment of the nation's public buildings. This beautiful art has not succeeded in maintaining itself among us, and the Windsor factory, which began well and had at first some deserved support, will have to be closed unless public bodies in Great Britain will follow the example of France and decorate their public halls and galleries with some of its beautiful productions. Many of my audience may remember the pleasant group and figures in statuary, modelled by M. Dalou, who exhibited in England for some years statues of peasant girls and women. He was one of the energetic band of artists who were to be found among the defenders of Paris against the Germans, and after the city had fallen, and was in danger of disgrace as well as of defeat by the insurgent hordes of the Communists, M. Dalou was not afraid to have himself inscribed as one of the insurgent officials. For what purpose? To fight the Government of law and order? No, but that he might from within the city save its artistic glories from the torch of the incendiaries, which laid in ashes so many of the grand buildings of Paris. He and his friends were successful in rescuing the wondrous treasures of the Louvre; and now Paris in its gratitude gives him commissions for great works that have occupied him since he was allowed to return to his country, and will occupy him for a good many more years. Very noble designs are they which are now being executed by him, and worthy types of what a proud people may expect from its sons as illustrative of trials and endurance. His studio stands not far from that Champ de Mars which so many thousands of us have visited for the sake of the Exhibition this year. Were our councillors to give like commissions to our painters and sculptors we should be following a worthy example. Of old, Scotland did appreciate French architecture, and we have men who could apply the best foreign examples to native needs. When shall we hear of a Scottish bailie rising in his place in council and moving as a matter of course that sums be given to our own people to decorate our public places? Were the experiment tried it might succeed better than some of us may imagine. Manchester has employed Mr. Madox Brown. Who will at Edinburgh honour himself and Auld Reekie by first making a similar proposal? You may have seen some articles by Lord Armstrong speaking of the too great expectations raised by the talk of this spread of technical training, but he also indicates drawing as one of the most useful things a boy can be taught. The eminent President of last year, and others, spoke each of his own profession, whether painting or of sculpture. It is evident that were Sir Frederic to have honoured us this year at Edinburgh by his presence, he would have paid homage to the natural beauty of the site of this capital, and would have extolled the individual patriotism of him who restored St. Giles's. It seems to me evident also that he would have recommended that a match be laid to a gunpowder magazine in the Castle, so that the explosion might vary a little the grim formality of line which characterises the lofty range of barracks on that historic rock. But perhaps he would have waited to perform this operation, so necessary from an æsthetic point of view, until he had had a little time and preparation to direct the guns of the Argyll battery at that awful monument of industrial hideosity which rises in the shape of a tall factory chimney in the middle of the fine valley beyond the North Bridge. And then he would not have been content until he had brought his guns to bear upon some of the stony horrors of the Calton-hill. In speaking of improving the taste displayed in the jewellery and silver and gold work in the shops of the tradesmen of the city, he said: There is probably still much to desire in the improvement of the skill displayed in undertaking the creation of statuettes, in silver and bronze works intended as gifts or as prizes for racing and athletic games. It is not sufficient that we should improve the taste in comparatively technical details; we should be able to have designs for such purposes,—such as the little statuettes you see by the dozen in the museums of Italy, which prove that the ancient artificers could as easily put the clay into the form of man or woman as the later mediæval artists of our northern climes twisted into graceful knots and foliage the tails of the grotesque animals which Saga or elf legend made him believe to exist in forest and lake. You will probably know the cave-studio formed out of a cliff by the side of the road that leads from Naples to Capo di Monte. In that cavern may be seen the curious art of the bronze caster most profitably and perfectly followed. The antique is accurately copied, so accurately, even to the oxidization of the metal, that it is next to impossible to know the original from the perfect counterfeit. And it is almost from beneath their feet that the rare and fine old models came. They were often gathered from the ashes of Pompeii, or from the black lava which entombs Herculaneum. A rare fidelity to nature, a wondrous power of copying attitude and expression, a mastery of proportion, and a taste for grace shone in the work of those Roman workmen, and why should we despair of being again like unto them? At present, if we do copy an old model, we see too often that the eye for proportion is no longer so keen, and that hands and feet are made too large, and a general clumsiness is traceable in the copy. We have abundant and abounding subjects in our own national history which should fire imagination and produce results. Why should not the figures of our great heroes be as common as were the wondrously-fashioned figures of the old gods? Why should we not have Diarmaid and Graine, King Arthur and Sir Balva, Fionn and the Feinn, and Bruce, and Crichton, and Wallace, and Dundee as forms of men familiar to our eyes as to our ears, just as Hercules and Apollo and Mercury were familiar to those old people whose touch was grace, and whose homes were haunts of genius, for they shaped their household things to images of joy, and coloured their walls with the great memories of deeds which the indwellers were to see, to recall, and to emulate? They did not stick upon their hearths vile caricatures of the Cæsars or of the Consuls, or of the Ædiles of their people. What we discover in their homes was noble in draughtsmanship, even though the subject be often ignoble; but our folk, whatever may be their politics, have no hesitation in buying an atrocious print of their modern political hero, and placing him, apparently as a scarecrow against their own feeling of adoration, above the fire at which they warm their feet. Can anything be more dispiriting than the terra-cotta images we see on mantelpieces of our best authors, our most eloquent statesmen, our most popular men? They are more like the wax images the witches used to be supposed to make of the people they hated that they might stick pins into the likenesses that pains should follow in the like afflicted parts of the subjects of their detestation. Germany and Berlin have good ironwork statuettes of her heroes of the wars of Frederick. She has, through Wagner, put into harmony the legends of her shadowy warriors of the Nibelungen Lay. Stevenson has well worked to deprive Scotland of the reproach of having no good statue of Wallace. Why not have good small copies of his statue at Aberdeen made in bronze for a people who cherish the soldier-martyr's memory, and desire to help a countryman? Hamish MacCunn is doing work in music that will live, and we may yet have the blind Harry and the Fingalian legends touched by him. But what a wide field there is to occupy in art to-day! We need not be ashamed of what we have done in painting here. A most generous gift from a large-hearted Scotsman has given us scope for a display of the canvases of many of our best men, and the land that produced Jamieson and Raeburn, Faed and Noel Paton, has no cause to blush for deficiencies in painting. I have sometimes met with a feeling that to care much about these things is a proof of womanish tendencies, of impracticable ideals, of unworkmanlike or unmanly aspirations after comfort and luxury, rather than use and progress. I have heard it said, "Oh, we are a hard-working lot, we have no time or use for these things; we are too poor to pursue decoration, too practical to delay a moment to get grace or manner or attractiveness; we are too pushing to dawdle over design." Yet the busiest have ever a moment to help to make them more busy. The race for wealth is full of possibilities, and he who pushes ugly wares into the market will now find that his defter antagonist can beat him by aid of designs and the form that takes captive the eye of the purchaser. Mere beauty made the trade in amber in ancient days profitable to the rude dwellers on the Baltic, and every object that exhibits some new form of taste will have its money value. After pointing to various examples of art applied to ecclesiastical building in early times, Lord Lorne said there was one feature of Roman and Italian example we had as yet failed to follow, and that was the exterior adornment of our buildings by the aid of colour. The London white-surface bricks, he said, are now successfully used, and frost does not injure them. Why not have other colours? Why should not the smoky streets of Manchester, and other towns still more under the smoke pall of the Black Country, not be made to look as bright as colour and glazed tile can make them, with an occasional wash down from a street hydrant? All the hues so harmoniously shown on the tropical birds could be imitated to make these towns look like gardens instead of looking like dirty brickyards, as they now do. If less vivid tints be wanted, why not copy the diaper work on the Doge's Palace at Venice? In towns where the air is clear the glaze might be dispensed with, but how much even a partial employment of such coloured surface would light up the gloomy vacancy of our walls. In his concluding remarks, the President said: It is in the power of Art to awake the nobler senses. It is her function to raise the mind from what is low and mean and sordid; it is her province to show forth the beauty that lives in most of what exists around us, hidden though it may be by what is common or unclean. Art may point out the divine in human and natural forms, and show where the finger of God is visible among the defacements of His works; she can excite the deepest feelings of religion or of patriotism—it is for this we desire that she may dwell among us.

On the motion of Lord Kingsburgh, a cordial vote of thanks was awarded to the Marquis of Lorne for his address.

On Tuesday the sectional meetings were held. In the Section of Painting, Mr. Briton Riviere presided, and delivered an opening address, which we have in type, but it is held over this week for want of space.

A paper by Mr. Watts, R.A., on "The National Position of Art," was read, in the absence of the author, by Mr. M'Lachlan.

In the Section of Sculpture Mr. E. Onslow Ford presided, and gave an address.

On Wednesday, in the combined Sections of Sculpture, Architecture, and the National and Municipal Encouragement of Art, Mr. Philip Rathbone read a paper on "The Political Influence of Art."

Architectural Effect in Cities.

Mr. H. H. Statham, Editor of the *Builder*, read the following paper:—

As the subject of municipal legislation in reference to architecture is to be considered at this meeting, it will perhaps not be out of place to suggest briefly, from a purely architectural point of view, what can be aimed at or realised in the architectural effect of cities, before we come to consider how far legislation can assist (or hinder) the desired result.

In the broadest view of the subject, a whole city might be regarded as in itself a great architectural work, the combination of details to form a grand architectural composition. Then we have to consider the effect and the laying-out of the principal centres of the city, the most important public buildings, and the squares and open spaces adjoining them; and lastly the architectural treatment of the ordinary streets and street buildings.

It will at once occur to most of us that the first object suggested, that of treating a whole city as a great architectural design, can be in these days little more than a delightful architectural day-dream. That light-hearted founding of new cities, which was one of the favourite amusements of Alexander the Great and others of the now extinct race of beings called "conquerors," is an operation hardly to be expected in these democratic days. Cities are now no longer "founded": they develop, like everything else, on the principle of evolution. Yet it is as well to keep before our minds what might be done in this way if opportunity offered,—such opportunity as a State-aided colonising enterprise might possibly afford in the future. Take, as an example, Liverpool, where this Association last met; a city which has been built by degrees up the slopes of a hill rising gently from the estuary of the Mersey, and forming a slight concave bend, the estuary being the chord of the arc. If we could imagine Liverpool built over again from one comprehensive design, rising in platforms and terraces one above the other in great sweeps along the curve of the hill, with the broad inlet of sea-water at its feet, it might form an architectural effect such as has hardly been seen yet in any city in the world. But though we cannot expect to have the chance nowadays of thus planning a great city as a whole, with the object of rendering it as beautiful and striking as possible architecturally, still we see examples in modern times where this kind of architectural laying out, this city-designing, as it may be termed, has been carried out to a considerable extent and with very fine results. The Ring-strasse at Vienna, for instance, almost amounts to giving a new architectural design to the city, independently of the design of the separate buildings which go to make up the total effect. In our country, Bath is an example of a city which has been to a considerable extent planned and carried out at one time, and under the direction of one man, Wood, an architect of genius in the prim taste of his period; and Bath has inspired Mr. Swinburne with one of the brightest and most enthusiastic of his later lyrical poems. And here in Edinburgh there has certainly been something like architectural design and contrast on a large scale, in the manner in which the portion of the new town which is contiguous to old Edinburgh has been laid out by the Georgian architects with that centralised symmetry and parallelism of line which renders it such an effective base to the picturesque irregularity of the old town. I admit that I find much of the new town too cold and formal as street architecture; but I consider the laying out of the parallel lines of the gardens and Princes-street, flanking the old town, a most fortunate and effective piece of architectural contrast as a whole, whatever may be thought of particular buildings which enter into the composition. More lately, in the Gothic revival period, there were some attempts to erect new Edinburgh buildings in the Mediæval style. These may have had their own merits individually, but I am quite sure that if this theory had been adopted in the building of the main portion of the new town, we should have lost one of the most effective elements in the city scenery of Edinburgh, the contrast between the Classical and Mediæval manner of city building; not only the contrast to the eye, as a matter of composition, but the contrast to the feeling and association, when we find that a walk across the bridge from Princes-street to High-street takes us, we might almost say, into another age at once. There could hardly be a more striking instance of what may be the æsthetic effect of one or another system in laying out a large portion of a city. Try to imagine the new town of Edinburgh laid out and built as a modern-Mediæval town, and you will be able to form some idea of the difference this would have made in the whole architectural effect and sentiment of this beautiful city.

Besides the disappearance of conquerors and the consequent decay in city-founding, already referred to, there are two very important distinctions between the conditions of ancient and modern cities which have a great effect on the treatment and the possibilities of city architecture. In ancient and mediæval times every important town was walled in with fortifications which compressed it within definite limits, with results on the character of the town architecture which we shall refer to just now; and of course this practice had the effect of giving a more distinct architectural individuality to the town, making it a defined structure instead of, as in modern times, a mere tract of country irregularly overspread with houses. The other distinction is that the line of ancient streets was mostly defined by accidental circumstances, either arising out of the original contour of the site, or depending on the boundaries of ownership. Hence the picturesque irregularity of line of the majority of ancient streets. In modern times it is generally considered that a street is or should be the shortest route between two points, and, moreover, that it is more for the convenience of the buildings erected along the streets that they should run in straight lines. This latter point cannot be gainsaid; the practical advantage and facility in planning buildings on a basis of straight lines and right angles is unquestionable, though too much weight ought not to be attached to it to the exclusion of other important considerations.

Before quitting the first head of the subject, the general architectural aspect of cities, it should be noticed that the character and outline of any important building to be erected in a city should not be decided without reference to the general character of the city and the site. Generally speaking, it may be said that a large dome is always a fine addition to the *ensemble* of a city. Every one knows how St. Paul's, St. Peter's, and Santa Maria del Fiore stand out in every view of London, Rome, and Florence respectively, and how inferior by comparison is the effect of the thin-lined centre lantern of Milan Cathedral as the leading feature of a city. And a dome looks effective whether on flat ground or on hilly ground; but perhaps more effective on high ground. A high tower, on the other hand, only gets its full effect on a level site; on the top of a hill it has an effect of insecurity; below a hill its vertical effect is lost, being killed by the lines of the hill, which compete with or overtop it. A lofty tower, therefore, is a feature for a city with a low and level site: and moreover, in placing the tower, it should be an object to get buildings of a strongly marked horizontality of line in juxtaposition with it, so as to give more effect to it by contrast of line. Two towers of similar height placed near each other are rather likely to injure than to enhance each other's effect, unless in the case of twin spires forming part of the same design. If kept far apart each has more effect in itself, and there is the chance of the fine effect of seeing one in sunshine and the other in shadow—an incident which every painter delights in.

The dome and the tower may be taken respectively as the two types of prominent city buildings; they represent the comparatively low and massive building, and the high and narrow building, and what is said of them applies respectively to all buildings which represent either of these characteristics in their proportions and outline. Coming to the question of the laying-out of the sites which form important centres of effect in a city, it is sometimes debated whether we should aim at symmetry and centralisation of arrangement of the spaces and buildings in such a case, or whether a picturesque irregularity is preferable. I say emphatically, aim at symmetry and stateliness of effect in the important centres of towns—stateliness, because that means dignity, and dignity and a certain palatial effect are proper to the public buildings and squares of great cities; and symmetry, because this designing of architectural combinations in city architecture is essentially and necessarily an artificial thing, and should be treated accordingly, and make no attempt to play at being accidental and picturesque in the ordinary sense. It is sometimes remarked that St. Paul's gains much in picturesque effect through being placed obliquely to the thoroughfare that leads up to its west front; perhaps it does, but that is because Ludgate-hill is only an ordinary and rather narrow street of shops not worthy of the situation, and it is fitting enough that the great Cathedral should pose independently of it. It would be a very different thing if Ludgate-hill were a great avenue of columnar classic structures in harmony with the Cathedral. Take the case of St. Peter's, with its artificially designed *place* with the fountains and the sweep of the colonnade on each hand, and if any man maintained that the façade would be better for facing obliquely to the *place*, I should say he was a man of essentially lob-sided intellect, whose character would probably be found to have some perverse twists in it. In England we are most oddly indifferent about this matter of the planning of buildings and open spaces in architectural relation with each other. An irrepressible and mischievous Commissioner of Works has had the State arch at the head of Constitution-hill rebuilt so as to stand on the side of a slope and cut into the middle of an irregular curve and face nothing in particular, while the laying out of the space in front, the very centre of the social circulating system of London (a foreigner described Apsley House as "No. 1, London"), has risen to nothing better than a series of leg-of-mutton-shaped spaces between intersecting roadways. The Albert Hall and the Albert Memorial have been built just sufficiently out of central axis as to appear as if they had been intended to centralise, but the plans had been set out wrong by a blunder in surveying. A French architect or a "Ministère des Travaux Publiques" capable of committing such blunders would never hear the last of it; they would be permanently discredited as incapables. I may be told it would be equally so in Edinburgh: I should not be surprised to hear it. I am sure that if Edinburgh can give London any lessons in this respect, they will be lessons very much needed.

The architectural treatment of ordinary streets is a different matter. Much may be reasonably urged in favour of either the regular or the irregular treatment of street architecture according to circumstances; there is no absolute æsthetic right or wrong in the matter; they are two different classes of effect. In ordinary streets of passage, so to call them, it is no doubt best to leave each separate tenement to adopt its own architectural treatment; nothing can be duller than a row of uniform houses of a small class repeating the same features. But when your street is an important one, leading up to a principal square, for instance, or when it is a square designed partially for architectural effect, I do not think it is a false or unreasonable treatment to group the houses so as to form parts of one main design, and to prevent individual owners from infringing on this; a point which I believe has been a *casus belli* in Edinburgh recently. Nothing like *stateliness* of effect can well be got without this; only it must be remembered that uniformity in general design does not necessarily imply uniformity and repetition in minor details. Habitations may be grouped symmetrically as to their main lines, but varied in their treatment of detail, so as to give an individuality to each beyond that furnished by the number on the door. The builders of the Georgian brick streets of London, dull as they are—"long unlovely streets," as the Poet Laureate has stamped them—kept this in mind: the details of the entrance doors are continually varied, monotonous as the main line of front seems.

The picturesqueness of huddled-up overhanging houses and narrow streets, which we all like so much in a pictorial sense, had its origin in that walled-up condition of mediæval towns before referred to; the city could extend no further than the walls, and every square foot of ground within must be utilised to the utmost: it could only grow by additional crowding. However much we may admire this effect in old towns, let us beware of attempting it in new ones, where the excuse for it no longer

exists. It is a melancholy reflection that the picturesque in towns is too often the insanitary. Look at the bits from old cities which form the staple subjects of architectural pictures in our water-colour exhibitions; you will scarcely find one of them which a right-minded sanitary inspector would not wish to make a clean sweep of. Sanitation first, picturesqueness afterwards; that is the stern lesson which the modern study of the conditions of healthy life in cities has taught us.

The question of the laying-out of ordinary streets in regular or irregular lines, referred to just now, is partly affected by sanitary considerations. At all events curves should be avoided unless of very large radius. The concave side of a row of houses built in a curve of comparatively small radius is likely to be deficient in circulation of air as compared with a straight row. Crescents are charming in effect, but not sanitary. For a similar reason houses arranged in a square or quadrangle should always have the angles open; which fortunately is generally compulsory, on account of street access. Slight curves of large radius do not affect the question in a sanitary sense; so here the question comes in, are we æsthetically justified in deliberately laying out an ordinary street in winding lines for the sake of effect? The great beauty of this results from the manner in which buildings such as church towers, which would otherwise be side objects in the vista, come out to the centre of the view. This is what makes much of the effect of High-street, Oxford, which has been immortalised in Wordsworth's fine line—

"The stream-like windings of that glorious street."

But the effect of High-street is a spontaneous, not a contrived, effect; and I cannot help thinking that if one proceeded to do it over again deliberately, there would be a sense of unreality and pretence about it; the fact that it was not spontaneous would be sure to force itself on one's notice. My conclusion would be that any such varying of the line of a new street for effect should appear as part of a definite scheme; a curve introduced to bring an important building into the view for instance, and with that evident object; in short, that being an artificially-contrived effect, it should appear so, and not pretend to be a happy accident. And one more caution in regard to street architecture, much needed at present, is not to carry the buildings too high in relation to the width of the street. The same height as the total width of the street ought to be the extreme limit, and a lower proportion than that is far better. A street flanked by buildings higher than its width becomes only a magnified alley.

In cities of moderate size (not, like London, an immense tract of country covered with houses), it is well to endeavour to lay out streets, where possible, so as to introduce into the vista some point of interest or beauty in the surrounding landscape, thus connecting it with the city. Even in London something like this is possible, for the remark was suggested to me by an incident in connexion with one of the longest, straightest, and dullest of the London streets of the Georgian era, Gower-street, which the cockneys call "*Gow*-er-street," and in which it is at present my lot to live. Not too often, but on every day when the London atmosphere is clear enough, I have a vision down this street of a green or purple hill, according to conditions of light; Hampstead Hill, which just fills up the end of the vista between the two rows of brick. I am afraid I should quarrel with any one who proposed to place even the very best-designed building so as to shut out that little vision of Nature's light and colour.

The whole subject is of course susceptible of almost endless development and illustration in detail. I have here only attempted to touch briefly on the leading principles which I think should be kept in mind in regard to the treatment of city buildings and streets from a purely architectural point of view.

Municipal Legislation with Reference to Architecture.

Sir James Gowans, Lord Dean of Guild of the City of Edinburgh, contributed the following paper on this subject:—

In so far as this country is concerned, there is no legislation which practically bears on the subject of this paper. The origin of legislation elsewhere, so far as I can find, appears to have begun with the Roman Ædile Court, founded some 500 years before the Christian era. Of this court Prof. Hunter, in his book on Roman law, says, "The jurisdiction of the 'Ædiles' seems to have been limited. They had the management of the local Police and Public Works." This general expression, however, it is well-known, covered a good deal of control, and however it may have been extended, and in its ultimate effect exercised, throughout the civilised world by Masonic Crafts, Guilds, Municipal Authorities, and otherwise, it cannot be doubted that every city in Christendom bears marks of its beneficial architectural operation. My reading does not cover a knowledge of all the powers exercised by Continental States during the centuries, of an Ædile description. It is well known, however, that the municipal administration of the cities of France, including Paris, has an unlimited sway over the treatment of the exterior of buildings, including the style of architecture, the character of the elevations, &c.

The Courts of the Dean of Guild in Scotland have not by common law, or by statute, any direct control in questions concerning the style of architectural treatment to be adopted, or the kind of material to be employed in the construction of buildings,—their functions being limited, though somewhat varied between "lining" as it is called in Glasgow, that is fixing the lines or boundaries of adjoining properties, and in Edinburgh to questions specially of stability and sanitation.

The Municipalities, as distinguished from the Dean of Guild Courts, have no other power (if power it can be called) than that of the negative one of restricting the height of buildings, and setting back the lines of properties causing obstruction when these happen from demolition to afford an opportunity of correcting the line of frontage, *at the public expense*. Even this power I am unable to trace further than the Police Act of 1848. It may be interesting to notice in this connexion that so long ago as 1424, in the reign of James I., statutes were enacted which enforced that buildings should be restricted to two stories in height, with dormers, or three stories at the utmost, from which it appeared that 22 ft. ladders were considered long enough for use in case of fire, in all burghs in Scotland. This, again, is no doubt the origin of the existing law of keeping back buildings on public highways a distance of 25 ft. from the centre of the roadway.

In England, Manchester and Liverpool, and probably other cities, have restricted special powers, relating to the architectural treatment of buildings which are to be erected on ground which may have become the property of the Corporations, and the same power seems to rest in the hands of the freeholder in London and the superior in this country, who, under their leases or feu-charters, as the case may be preserve a right of approval of the buildings to be erected in their grounds. This, however, is not more than in any case can be stipulated by the superior or feuar of a property as a condition of granting the conveyance.

In this city, under the Improvement Act, the Commissioners whose powers have just terminated had the control in all such matters, and this was exercised, as may be seen, with beneficial effect. Generally, however, neither our Town Council nor the Dean of Guild Court have any control over the architectural features of buildings, so far as the exteriors or elevations of the same are concerned.

In England there is no jurisdiction corresponding to that of our Dean of Guild Court, and such architectural authority as they have is necessarily exercised by the whole municipal corporation. This, according to our Scottish lights, is a clumsy and impracticable way of disposing of such business. In Edinburgh such a course would be a waste of time.

What I have said naturally leads directly up to the question of whether it is desirable in the interests of communities that legislative power should be got for controlling the architecture of buildings, or defacements of an injurious kind, and how it should be effected.

Nobody will suggest the subversion of our Courts of Guild, probably the most ancient municipal institution of which we are possessed. The members of these courts, as at present constituted, are elected in virtue of the practical and theoretical knowledge which they possess concerning the stability of structures and the science of sanitation. Such a court as we possess in this city could not, and would not, profess to deal with questions of taste, that not being their province, and, probably, the community would not readily acquiesce in their judgment. At present all they can do, where they perceive the intention to commit any glaring architectural outrage, or to deface or destroy what is good in existing buildings by the use of incongruous materials or otherwise, is to remonstrate with the petitioner or architect; but it can easily be seen that this course, in many instances, is at best but a negative effort. There are occasional outbursts, through the press, when anything offensive to the public occurs; but these complaints generally come too late, when protest is in vain.

It must occur to any one who gives a moment's serious thought to the question, that Edinburgh, with its superb situation, naturally affords to architects the fullest scope for the production of fine and beautiful architectural effects,—and how much they have it in their power to heighten or mar its beauty! It has often been said—well said—that her face was her fortune, and every citizen who values her good looks, as afforded by nature, deplores the monstrosities that are now and again erected within our precincts.

Taking a stand at the top of the Mound, at a point where the spires of St. Cuthbert's and St. Mary's come into line, no one can withhold their admiration of the beautiful prospect which here meets the eye. On the left we have the grim and powerful outline of the Castle Rock, standing sentinel, as it were, over the valley below. Letting our gaze travel westwards over the distant portions of the city, we experience a feeling of proud satisfaction as we take in the harmonious grouping of the various towers and domes, but as we turn nearer home, to Princes-street lying on our right, a sensation of restlessness comes over us, and as the eye reaches the sky-line, of what should be the most beautiful street in the world, we are forced to admit that for want of some broad controling power, the beauties of the situation have been sacrificed, and many deplorable features allowed to creep in. Most of the gable ends adjoining Princes-street are totally wanting in architectural treatment, and obtrude themselves unpleasantly on the eye, making one regret that those who showed themselves capable of designing pleasing fronts should not have thought it worth while to give the same, or at least some, attention to the gable-ends and backs, while the collection of chimney-stacks of all shapes, sizes, and heights, eked out with every monstrosity which goes under the name of a cowl, makes one turn away from the contemplation of the scene with a sigh for what might have been, and a groan for what is.

With a few exceptions, many of these erections are loaded with expensive carvings of a very rude description, and to show what a properly-educated architect can do without going to a needless expense with elaborate carving, and how much depends on due proportion and a refined taste, I cannot be wrong in pointing out the New Club as a building dignified and assertive in its repose, and worthy of being studied by every student of architecture.

The same may be said as to the buildings in the suburbs of the city, where some superiors appear to value the amenity of their ground, and the architects who lay it out, and who have the passing of the plans of feuars, are careful not to allow anything very objectionable to be built; others, again, seem to care for nothing but covering their ground, and so securing their feu-duty.

Having said so much as to the desirability of some control being exercised over buildings, I come now to consider how this may be effected.

I somewhat shrink from stating my views as to how this is best to be done, as, no doubt, the difficulty would be to get a body of men of acknowledged architectural taste and artistic education as a court of appeal in whom the citizens would have confidence; but I throw out the suggestion that architects and others would be safe if powers something like the following were got and wisely exercised:—

First, to confer upon the Dean of Guild Courts at least negative power with regard to the proper architectural construction of buildings. That is to say, that the Court shall, in the first instance, decide whether any building is in itself, or in relation to its architectural or natural surroundings, or other considerations, objectionable and affecting public propriety and interest, and that there be, if it is desired, an appeal to a court of taste to be constructed of, say, the following:—The Principal of the University, Professor of Architecture (if such a

chair could be established), Professor of Art, President of the Royal Scottish Academy, Chairman of the Board of Manufactures, Chairman of the Cockburn Association, and the President of the Architectural Association.

But *second*, and of not less importance, let it be enacted that only architects having the guarantee of professional knowledge and ability authenticated by their position as members of an Architectural Association, constituted by law, equivalent in its own department to that of Law or Medicine, should be privileged to prepare plans for the Dean of Guild Court.

As matters stand, while the most trivial petition to sanction a plan is in most cases presented by a qualified Procurator, the plan may be the production of any person who has had no training to qualify him as an architect. This is no exaggeration, and the fact remains that men entirely destitute of any enlightened ideas of architecture are constantly employed to carry out what they are radically incompetent of doing.

I would observe here what I have again and again pressed for in addressing the architects of this city, that their profession will never have the status that it is entitled to until a Professor of Architecture is established in our University or attached to the Royal Academy under their new charter. In this way young aspirants to architectural fame, in addition to serving a regular apprenticeship or pupilage to a properly-qualified practitioner, would have to undergo a course of study, applicable to their profession, and they should have a diploma showing that they had so qualified themselves. By this means you would secure men who had undergone a proper training, and who would understand the elements which produce good architecture. Thus you would be more likely to get true form and proportion, so that the unshapely and distorted buildings we now see erected would become things of the past.

In conclusion, and referring again to our city, it may be worth while to notice what has been done to enrich its natural beauty by designs of great architectural merit. Elliot's east end of the Prison Buildings, Waterloo-place, St. Paul's Church, and County Buildings, Hamilton's High School, Burn's New Club, and Bryce's Buildings all over the city, Playfair's Donaldson's Hospital, and works on the Mound, St Stephen's Church, and last, not least, Kemp's Scott Monument, all show that men of high class in the past, with scholarly attainments, have regarded the natural advantages of the respective situations, and in most cases have taken inspiration from studying the splendid sites the city affords. A continuation of like effort and good result in the future we may look upon as assured to us if we view the works erected more recently, but the greater aim of the future should be so to raise, by proper instruction, the standard of architectural skill and artistic ability, that even the least of the many works the architect has to deal with may give evidence of having received intelligent thought and care in its treatment.

Artistic excellence is a quality that may not be found in all who seek to pursue an architectural career, but even where that is wanting its absence can at least be condoned if there is shown to be a knowledge of the history of architectural forms and proportions sufficient to save the design from being offensive. To secure this it is necessary to have—first, a more complete equipment of education special to the architect; and, second, to have legislative authority vested in such a body as has been named whose neutral composition and discriminating judgment would lead up to a higher estimate of and appreciation for the fitness of things in architecture.

The conclusion at which I arrive is,—that more extended and effective powers than now exist should be vested in some responsible authority, and that one means, and an essential one, is, that the profession of the architect should be authoritatively placed on a higher and more responsible position than at present.

The Influence of the Public Authority on Street Architecture.

Mr. Thomas Blashill, Architect to the London County Council, submitted the following paper, which was read for him in his unavoidable absence:—

The question of interference by the public authority with the architecture of our streets touches the whole of us more or less. That my house should not burn is of almost as much importance to my neighbour as it is to me: that its front should not fall out into the street may be of vastly greater consequence to the man in the street than to myself. These are practical considerations; beyond them is one that may be called sentimental, but is hardly of less interest. So long as the fabric is secure, the owner, and even the occupier, may be absolutely indifferent to its external appearance, though that shocks the artistic sense of the town. In every decently-ordered community questions of security are dealt with by the law, but the question of sentiment is neglected, or dealt with only indirectly, and by chance.

The Metropolitan Buildings Acts, under which London grows and is renewed, contain important provisions as to structure and, indirectly, as to design. The use of combustible materials in external walls is all but prohibited; the area of the door and window openings in the outer wall is limited to one-half the whole area of the wall; in new streets less than 50 ft. wide, the height of the front must not exceed its distance from the opposite side of the street, unless the "public authority" otherwise permits; the same sanction is required for projections beyond the face of the wall, whether they stand upon your own forecourt or overhang the public way. So that we have, indirectly, some very considerable restrictions placed upon the architect in matters of design. They close to him whole chapters of the most charming and interesting architecture in Europe. That the old timber buildings, or parts of them, are often imitated in cement and in iron, shows how impatient he is of such limits. The desire for picturesque irregularity is shown by the constant and increasing pressure on the public authority for leave to throw out projecting hoods and balconies, turrets and bays. A public body with a soul and a sense of humour would look kindly on these strivings after the quaint and the beautiful, and would rejoice when it could safely break the monotony of refusal and compulsion by gracious, sympathetic consent.

The building regulations of many English towns are founded upon those of London, without going quite so far in the direction of restraint. Those of the chief Continental cities generally go somewhat farther, especially in respect of the heights of buildings. Thus, in Paris the front wall cannot, in the widest streets, be carried higher than about 65 ft.; in Vienna the height of dwelling-houses may not, as a rule, be more than about 77 ft., while the floor level of the topmost story must not be higher than 62 ft., nor may there be more than five stories in the height of the house. In London no limit of height is actually fixed, so that a wall may be carried as high as 100 ft., and as much higher as the public authority may permit. In Sweden the regulations seem to touch the question of taste in a rather important way. The front of a house must not be painted white, but some colour inoffensive to the eye. In other respects, the Continental regulations are generally more restrictive than ours,—except as to balconies, the width of which, to the extent of about 4 ft., is legalised; while with us this (one of the most romantic features of the elevation) has, in every case, to pass through the chastening fire of the public authority, particularly if it overhangs the public way.

These are the fetters with which it has seemed necessary to check the free exercise of fancy in architectural design. That (in so many instances) elevations rich, varied, and beautiful, are produced, is evidence of the skill with which these designs are treated. But within those limits the building-owner is free to do as he likes. He may erect on the finest site in the town a façade fit only for a back street or a back yard: that he so often refrains from doing this is evidence of the moderation of his class. The question whether he should be allowed to exercise his free will in this particular is often asked on behalf of taste and the beauty and dignity and interest of our street architecture; and it is no doubt well occasionally to ask it.

Of the qualities that we may desire in a design, is it not above all necessary that it shall be interesting? It is not ornament that is needful,—of that there is often enough and to spare,—nor any strict proportion, nor even beauty. All these and other characteristics,—even the quaint, which is often but thinly partitioned from the ugly,—may be but items in a greater whole, and means to an end. The design should interest and arrest the attention. It may even do more. There are buildings that one gladly goes out of the way to see, and which we hope that other generations will reckon amongst the good things done in our time.

Would the interest of our street architecture be assured, or materially enhanced, by laws or by-laws? A good deal might be said for and against the idea. To compel a man to build securely will seem no unendurable hardship, even in his own eyes; but to make your neighbour build, not for his own pleasure, but for yours, is to touch him to the quick. The temptation to do this is, however, innate, and hard to resist. Next to the desire to do as I will with my own, is the desire that my neighbour should do as I will with his own—a sentiment by no means incapable of defence. He occupies a frontage upon the public street, which may be an exceedingly valuable privilege. Surely we may call upon him to construct his building with some regard to the public sense of fitness for such a position? His neighbours may fairly expect that he will be neighbourly enough to do something beyond mere necessary work for the public good; something that will not only give pleasure to the townsfolk, but help to spread the fame of the town. At the very least, he should refrain from doing anything to vulgarise and disgrace it.

But when we try to bring these ideas into working form, the difficulty begins. There must be some sort of censorship armed with power to reject and to compel; able to see, and not afraid to say, that one design is too poor for the position, that another is radically bad, and that a third is discordant with its surroundings. And it must not make too many mistakes. To form such a tribunal on a satisfactory basis seems to require a rather considerable command of a very rare and precious commodity. Taste—that divine endowment, the possessor of which has the power of seeing clearly how another person ought to look and act; and of saying, after the event, what the responsible, but unilluminated, doer ought to have done—a good deal of that is wanted here. Scoffers will ask how we can expect to find this quality in bodies of persons selected on account of their views as to roads and drains and finance, or the proper way of ordering the universe. And the scoffer might be, for an odd time, in the right, if taste were only the result of some special process devised for that particular end. But is it not rather (I ask so that I may be informed) a sort of by-product evolved during the development of many different forms of capability? I am more clear that enough of it will be found if it should be wanted than that it could be usefully employed in the way I have suggested for consideration.

Let us try to take the measure of the necessity for such control. I am not sure that it is absolutely new, but there is very little experience of it. The picturesque architecture at home and abroad, which furnishes models for our instruction, was, as a rule, produced without it. There is, however, some considerable experience of the influence of the public authority, in various countries, over street frontages that have come under its control owing to the improvement schemes which it has promoted. It is, perhaps, as a whole, the baldest and least interesting architectural work of modern times. It is void of the individuality which comes of the special requirements of each building-owner and the particular views of different architects. It runs into endless façades of cold, academic correctness, in which nobody takes the least interest, until the effect becomes wearisome to the eye. It may be richer, but it is hardly more interesting than the miles of streets and squares that were built to the approval of the London ground landlords of three generations ago. At that time architecture, as an art, was at least asleep, it has been, on very fair authority, certified as dead; after two generations of vigorous shaking it has been aroused and now shows undoubted signs of life. In the earlier time no controlling body with a character at stake could have permitted the introduction of any of the forms of architectural design which will stand, if not to the glory, at least to the credit of our time. It would be an exaggeration to say that we should still have been building Greek or Roman façades, and putting the greatest diversity of everything behind them, as it would best fit in. The artistic worm would in time have turned even under that iron heel. But no one can answer for the consequences if only one generation ago public authorities under the best advice had been charged with the responsibility of seeing that the architecture of our streets was kept free from offence

to the eye of taste,—the taste of those in power. We were then in the thick of the "battle of the styles," when a man's views as to the manipulation of brick and stone stamped his public character and influenced his private friendship, and when a variation in architectural manner was a lapse from faith. We know our actual condition, and that it might be better. It is not too often that a building, or a group of buildings, really arrests and interests one by its beauty or by any of the other characteristics that give value to a design. But it is not so very often that such effects are produced by the architecture of any other country or time. Individuality is a rich mine that should not be over much cramped by authoritative inspection. Undoubtedly, the modern tendency towards those styles that come under the name of "free classic," has given a death-blow to the cold and formal mannerisms of those who worked in the purer styles, and has lit up our streets with designs which, if they often amuse and sometimes amaze, do, upon the whole, greatly contribute to the adornment and the interest of the town.

Nobody can suppose that the action of the public authority could, by special regulation, produce the beautiful or the interesting, though it might repress or prohibit the commonplace, the ugly, and the incongruous. But while we are arguing this question, the need for such repression is growing less. The public interest in architecture and the power of satisfactory design are increasing side by side. The pottering attempts of old writers upon architecture to describe a building, old or new, have been entirely superseded by illustrations that speak all languages with a fluency and abundance of detail that could not have been imagined thirty years ago. This is immeasurably to the credit of our architectural press, and exercises the strongest influence on design. It cannot create genius, but it informs and instructs, fostering talent, stimulating fancy, and depriving ignorance of excuse. If an entirely incompetent designer should suffer rejection at the hands of an authority of any kind, I do not think he could greatly complain. The danger we run is from possible intolerance or caprice, or too great impatience of mediocrity. If we and our friends are of the elect, need we stifle our pity for weaker vessels? A friend of mine feigns sickness at the sight of a certain building, the design for which he thinks I might have caused to be rejected. It was the fourth design that was submitted for the site, and, being only human, I may have become rather weary of refusal. But he forgets the grave responsibility I have incurred. Who knows that there did not lie in one or other of the rejected sketches the germ of the architecture of the future, and that I may not have been instrumental in strangling, ere its birth, the new style?

The greatest length to which the law has hitherto gone in London in the direction of care for appearances is in the 17th section of the Act of 1882, which relates to structures that are simply neglected, but not dangerous. Where they have got into a "structural condition prejudicial to the property or the inhabitants of the neighbourhood," the owners may be compelled to put them into repair. To prevent the erection of an unsightly building is but a step, though a long one, beyond this provision; perhaps in a more sensitive age that step may become necessary to the comfort of the public, and the ingenuity of our legislature may be sufficient to bring it into the form of law. But, after all, are we not pursuing a shadow? What is the utility of art as applied to the architecture of our streets if, from the moment when it is displayed for a transient admiration, it begins to be covered, not with the hues of age and weather that would mellow and glorify it, but with the filth of the town atmosphere and the worse defilement arising from the streets? It will be difficult and, may be, impossible, to purify the air, but the houses call aloud for the cleansing hand. And I am disposed to think that a people that does not take care of the art which it has got is not very likely to reach, either by voluntary effort or by any sterner process, any very important position in relation to the art of the future.

[Of the further proceedings of the Congress we defer notice until next week.]

Institute of Painters in Oil Colours.—The "private view" of the exhibition of this Institute is fixed for this day, Saturday, Nov. 2.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday afternoon last in the Council Chamber, Guildhall, Lord Rosebery in the chair.

Loan.—On the motion of Lord Lingen, on behalf of the Finance Committee, a resolution was passed authorising the Council to raise a loan by the issue of 1,000,000*l.* Metropolitan Consolidated Stock (the stock to carry interest at 2½ per cent. per annum, and to be repaid at the end of sixty years, or, at the option of the Council, at any time after thirty years from the date of issue, provided that one year's notice of such repayment shall have been previously given), for purposes of expenditure authorised by the Metropolitan Board of Works (Money) Act, 1887, the Metropolitan Board of Works (Money) Act, 1888, and the London Council (Money) Act, 1889.

Appointment of a Valuer.—Sir John Lubbock brought up the report of the Standing Committee, the first paragraph of which was as follows:—

"The Council on July 9 last resolved to appoint a Valuer, at 1,000*l.* a year, directing at the same time that an advertisement should be issued inviting applications for the appointment, and that your Committee should, after conference, if necessary, with other Committees concerned, report to the Council the candidates whom they considered most suitable. Your Committee have now to report that, with a view to complying with the direction of the Council, they referred the applications, twenty-four in number, to a joint Committee consisting of three members from each of the following Committees, viz., the Improvements Committee, Bridges Committee, Corporate Property, &c., Committee, and the Local Government and Taxation Committee, together with a sub-committee of the Standing Committee, with a request that they would indicate the three candidates whom they might consider the most suitable for the appointment. The Joint Committee, having carefully examined the applications, have, after a personal interview with seven of the candidates, selected three. Your Committee have seen these three gentlemen, and weighed their respective merits and qualifications, and they now submit their names to the Council in the following order,—Mr. A. Young, Mr. G. M. Moyes, Mr. W. Rex. They recommend—

'That Mr. A. Young be appointed Valuer to the Council, at a salary of 1,000*l.* a year; that his duties be those set forth in the minutes of the Council of July 9, with any others that may hereafter be prescribed by the Council; that he do hold his office during the pleasure of the Council; that he be required to give his whole time to the duties of his office, and be not allowed to take any private practice; and that on retirement he be not entitled to any superannuation or pension.'"

After some discussion, the recommendation of the Committee was agreed to by a large majority. Later in the afternoon Mr. Young appeared on the dais and expressed his thanks to the Council for conferring this important appointment upon him, saying that it would be his endeavour, as time went on, to prove that the Council's selection was a wise one.*

Subways.—The Highways Committee presented a report containing the following recommendations:—

"That, subject to the recommendation of the Finance Committee that the necessary costs be incurred, it be referred to the Parliamentary Committee to prepare and introduce into Parliament in the ensuing session, a Bill conferring the following powers, amongst others, upon the Council as to subways, viz.,—

1. To construct subways of such form and size in such thoroughfares or streets, and at such convenient times, as the Council may deem desirable.
2. To compel owners of gas and water or other pipes and wires to use subways where made, and to remove existing pipes and wires into subways.
3. To charge rent for use of subways, and grant use of subways free for a given period as compensation in cases of compulsory removal.
4. To acquire, by agreement, the whole or portions of vaults or cellars under public streets when required to enable subways to be constructed.
5. To alter, for the purpose of construction of subways, the position of sewers, pipes, wires, or other works in streets, on payment of actual cost only of structural alterations.
6. To call upon gas and water and other companies to supply plans and full particulars of any pipes, wires, or other works belonging to them in any streets along which it may be suggested that subways should be laid.
7. To call upon gas and water and other companies to deposit plans and obtain the approval of the Council for any proposed alteration, renewal, extension, or addition to existing pipes, wires, or works in any thoroughfare or street.
8. To remove all disused pipes or works in public streets.
9. To make regulations for the use of subways."

In the course of the discussion, Mr. Councillor Haggis, the Chairman of the Committee, gave statistics of the thousands of openings made in the streets every year by gas, water, and other companies, to the great detriment of the proper maintenance of the roads, and stated that the subways already existing in the metropolis were about four miles in length, and had cost about 90,000*l.* to construct. Although these subways were made, they had at present no power to compel the companies to use them, and, as a consequence, they remained practically unused. Mr. Haggis observed that in all probability the Council would, sooner or later, have to control and maintain all the main roads of the Metropolis, and they would then find that the construction of a good system of subways, though expensive in first cost, would be truly economical in the long run. Eventually, the recommendation of the Committee was adopted.

A Proposal to Build on an Open Space.—The Parks and Open Spaces Committee reported that they had had before them a letter from Mr. J. H. Allen, the chairman of the Committee for Technical and Recreative Institutes for North London, stating that the Duke of Bedford had promised to give, free of cost, as a site for an institute, the garden in the centre of Goldington-crescent, St. Pancras. It was suggested by Mr. Allen that the Council should purchase the garden for a public open space; and that the Institutes Committee should devote the money paid by the Council towards the purchase of a site of building land in the neighbourhood. After some discussion, in the course of which it was remarked by Mr. Acworth that the Duke of Bedford's offer was a somewhat left-handed one,—a doubt being also hinted by Mr. Phillips as to whether the Duke or his assigns had any power to build over the garden in question,—it was agreed that Mr. Allen be informed that the Council is not prepared to adopt his suggestion, but agrees that it is desirable to keep the garden an open space, and hopes some other site for a technical institute will be found.

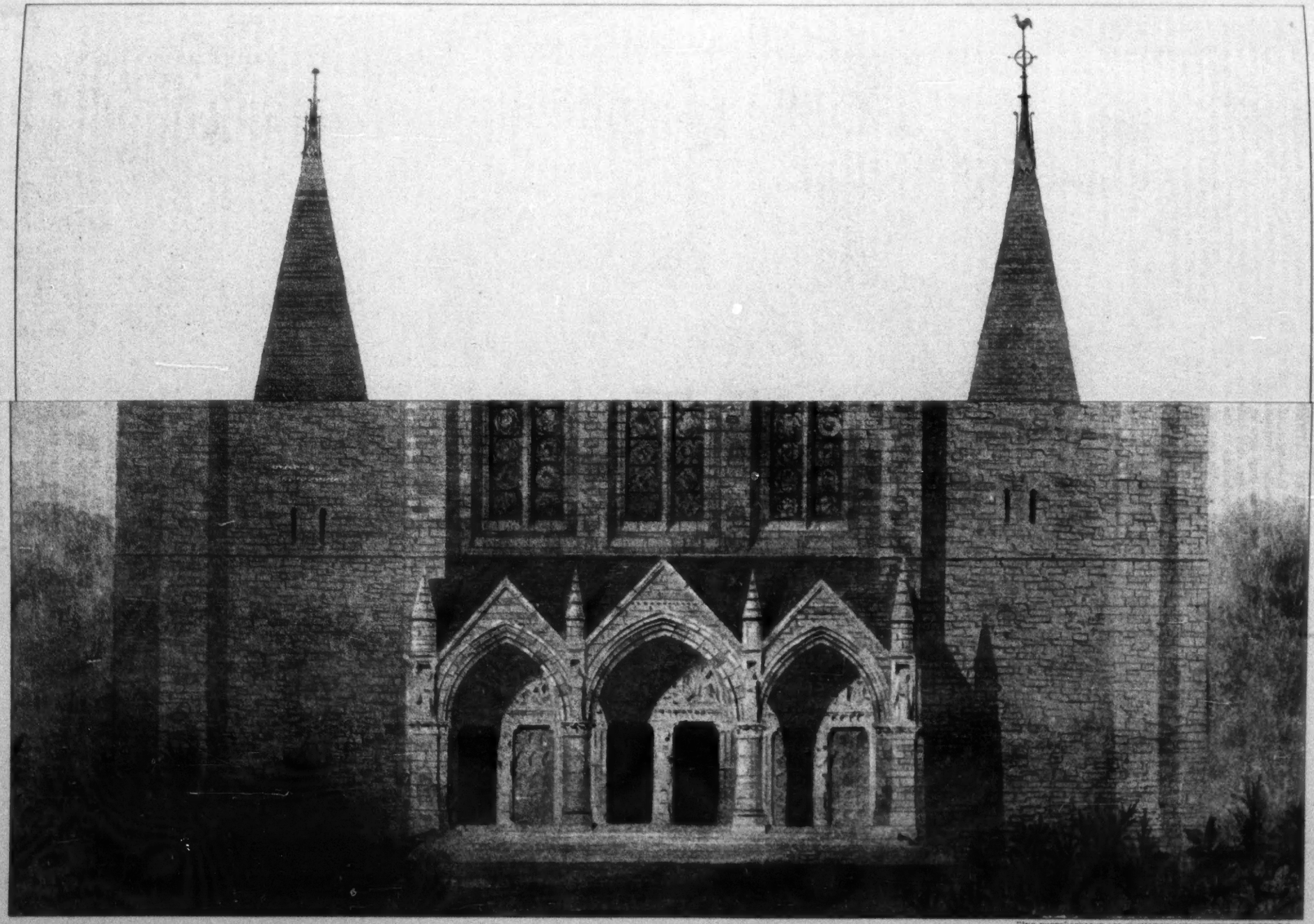
Inspection of Drains, &c.—The Parliamentary Committee reported as follows on this subject:—

"On the 22nd instant the Council, on the recommendation of the Main Drainage Committee, resolved to make application in the next session for the following powers:—

'1. To provide for periodical inspection of drains under houses, by Vestries or District Boards, and for the execution of such works by them as upon such inspection or otherwise may in their judgment seem necessary; a clause to be included requiring that means shall be provided for inspecting and testing house drains.
2. To prevent the construction of basements below the level of sewers, except with the consent of the Council.
3. To prevent buildings being erected in places where there are no sewers, except with the consent of the Council.'

Your Committee have inquired very carefully into the existing law, with regard to these matters, and they have arrived at the conclusion that legislation in the direction indicated is altogether unnecessary, especially having regard to the pending question of the establishment of District Councils. A reference to sections 82 to 85 of the Metropolis Local Management Act, 1855, shows that Vestries and District Boards already have the power to authorise the inspection of drains, privies, and cesspools, and to cause them to be put into proper condition when necessary. By clauses 75 and 76 of the same Act, and clauses 63 and 88 of the Amending Act of 1862, the Vestries and District Boards have absolute power to require the construction in new houses of drains, upon any plan or system they prefer, and under section 138 of the Act of 1855, and sections 32, 45, 46, 50, and 51, the Metropolitan Board of Works, and the County Council as their successors, are empowered to regulate the construction of sewers by Vestries, and, by section 202 of the Act of 1855, to make by-laws regulating the construction, cleaning, &c., of drains and apparatus connected therewith. There thus appears to be a complete authority, the Vestries controlling the house drainage, and the County Council the local sewerage system. Instances were mentioned to your Committee of one or two Vestries having enforced these powers, and, looking to the circumstances of the present law, your Committee desire more detailed instructions, being advised that the provisions of a Bill, when the existing provisions are sufficient,

* Mr. A. Young has been for many years the Surveyor to the School Board for London,—a post which will thus become vacant.



"THE PHOTO," SPRAGUE & CO., 62, MARTINS LANE, CANNON ST., LONDON, E.C.

WEST FRONT OF THE CATHEDRAL, HONOLULU.—Messrs. Carpenter & Ingelow, Architects.

will probably lead to objection and expense, and they recommend:—

'That, in the event of the Council approving this report, the reference made to your Committee on the 22nd inst. be not further acted upon, and that it be referred to the Sanitary Committee to settle by-laws under sec. 202 of the Metropolis Local Management Act, 1855.'"

Mr. Councillor Campbell contended that this report amply justified his contention, when the report was previously before the Council, that the Vestries had ample powers, but Mr. Brereton contended that these powers were nominal rather than real, and were therefore largely inoperative. The recommendation of the Committee was agreed to.

The Proposed Strand Improvement.— The Improvements Committee reported as follows:—

"The removal of the block of buildings on the south-side of Holywell-street will disclose the frontages of the houses on the other side, which will then become the north side of the Strand, and thereby acquire greatly enhanced value. Your Committee are of opinion that this property should also be scheduled, so that the Council may profit so far as possible by the increased value, or that, in the event of the property being required for further improvements in that locality, the Council should not have to pay the enhanced value when it requires it. Your Committee are of opinion that it would be unadvisable to furnish any separate estimate of the cost. The Council, if it sanction an application to Parliament for the above purpose, will not thereby pledge itself to take the property, the intention of your Committee being to bring the question again before the Council before any steps are taken for acquiring the property. Your Committee, therefore, recommend:—

'That powers be sought in the next session of Parliament to acquire the houses on the north side of Holywell-street, and that it be referred to the Improvements and the Parliamentary Committees to give effect to this proposal.'"

Mr. Marsland moved, and Mr. Brereton seconded, the following amendment:—

"That whereas the Council has determined by resolution of the 1st October to authorise the Improvements and Parliamentary Committees to take the necessary preliminary measures for the purpose of applying in the next session of Parliament for powers to remove the block of buildings on the south side of Holywell-street, &c., in order to put the Council in a position to deal with the whole of the new line of frontage to the Strand, to preserve the Church of St. Mary-le-Strand, and to recoup some portion of the expense proposed to be incurred, the Improvements and Parliamentary Committees be authorised to include in the said application to Parliament powers to acquire the land and buildings on the north frontage to Holywell-street, sufficient land and buildings on the north side of St. Mary-le-Strand Church, and a portion of the enclosure at the west end of the said church, so as to form a practicable roadway with frontage thereto."

This was carried. In connexion with the same subject the Committee also reported that their remonstrance relative to the long continuance of the unsightly hoarding around the Church of St. Mary-le-Strand had been met by an assurance that it will be removed on November 4.

Sewer Floodings and the Main Drainage System.—A good deal of discussion on this subject ensued on two motions standing in the name of Mr. Holmes, the general drift of which is indicated in one of our "Notes" this week.

After the transaction of some further business, the Council adjourned.

OBITUARY.

Mr. Arthur Stocks.—The death of Mr. Arthur Stocks, R.I., was recently recorded, after a short illness. According to the *Times*, he was born in 1846. He received his education at the Proprietary School, Islington, and on leaving school was instructed for some time by his father, Mr. Lumb Stocks, R.A., in his profession of line engraving; but, showing an aptitude for painting, the son entered the schools of the Royal Academy, then under the Keepership of Charles Landseer, profiting greatly by the instruction received there, and taking some of the medals.

Mr. William Pitman.— The death is announced of Mr. William Pitman, senior partner of the firm of Pitman & Son, Newgate-street, which took place at Highgate on the 23rd ult. The interment took place at Highgate on Monday last.

Architectural Partnership. — We are asked to mention that Mr. Thomas Verity, F.R.I.B.A., of 11, Jermyn-street, has taken his son (Mr. F. T. Verity, A.R.I.B.A.) into partnership. The "style" or title of the firm (to whom we wish all prosperity) will be "Thomas & Frank T. Verity."

Illustrations.

HONOLULU CATHEDRAL.

THIS church is being erected under somewhat peculiar circumstances. It was begun so long ago as 1865, but the funds then raised were only sufficient to enable some of the foundations at the east end to be put in, and to provide part of the stonework for the choir and its aisle. This masonry was executed in England, and sent out ready for fixing. Difficulties, however, arose, and owing to these and to other circumstances, the whole scheme was dropped for a time, and the stonework remained in the packing-cases in which it had come out. Matters remained at a standstill until Dr. Willis, the present Bishop, was appointed. The subject was then again taken up, and fresh designs were prepared; but it was not until 1882 that building operations were actually resumed. Since then steady and considerable progress has been made, the whole of the choir, with its ambulatory, having been completed, together with the three eastern bays of the nave.

Up to the present time the expenditure has been about 14,000*l.*, of which amount something like one-fourth has been contributed by members of the Mother Church in England. Funds are now being raised for the completion of the nave and the west front, but an architectural work on this scale progresses but slowly, and is of necessity very costly in an island to which almost all the materials have to be sent from other countries, and where skilled labour is paid at the rate of five dollars a day.

The illustration of the west front is taken from a drawing which was in this year's Royal Academy Exhibition. We will give a plan of the church next week.

The walling is of reefstone, found and worked on the island, but the timber for the spires will probably be sent from the United States; while the roofing tiles, glazing, and ironwork will go out from England.

Messrs. Carpenter & Ingelow are the architects.

BRONZE PANEL, S. ANTONIO, PADUA.

As one enters the gates leading into the choir of the gigantic and unique church of San Antonio, at Padua, one sees, let into the choir walls, and polished by frequent contact with the passers-by, four bronze panels, two on each side, the work of Donatello, representing the symbols of the four Evangelists. Our illustration reproduces a drawing, by Mr. Gerald Horsley, of the panel enclosing the angel of St. Matthew. The leaves of the book, some details of the scroll, and the circles on the background are gilt.

SKETCHES AT THE ARTS AND CRAFTS EXHIBITION.

THESE sketches give illustrations of several of the objects which we referred to as of special excellence in our article on the Arts and Crafts Exhibition three or four weeks ago (see *Builder* for Oct. 12, p. 253). All the objects represented were commented upon before under their catalogue numbers, which are appended in the illustration; and it is unnecessary to recapitulate here. We have endeavoured to give readers who are unable to come to London to look at the exhibition a more definite idea of the character of some of the work exhibited than mere description in words can convey.

DECORATION OF STAIRCASE, 89, QUEEN'S-GATE.

LIGHTNESS being an essential object in this design, the walls were coloured cream-white, the pattern on them being turquoise blue, touched up with gold. In the frieze the running ornament is cream-coloured, outlined in blue on a gold ground. The dado has a raised ornament in gold, on a straw-coloured ground, and a delicate terra cotta pattern decorates the soffit of the stairs.

Particular care was taken in this design in regard to properly filling the space, in order to avoid the ordinary objection of the rakes of stairs, and different heights of steps, cutting off portions of the pattern and forming ugly spandril spaces. The whole work has been specially designed to overcome this difficulty. The whole of the work was stencilled and details filled in.

Mr. Edward Bell carried out the work from my design and full-sized details and superintendence.—J. H. EASTWOOD.

ARCHITECTURAL SOCIETIES.

Birmingham Architectural Association.— A meeting of this Association was held at Queen's College, on Tuesday evening last, when the President (Mr. T. Naden) gave his opening address, in which, after referring to the excellent nature of the papers read at the meetings of the previous session, and the general success which had been the noticeable feature of the Association during that time, he proceeded to describe the present system of education for the profession of architecture, pointing out that the failure of an articled pupil to acquire a sufficient knowledge of the wide range of subjects which it was necessary for him to study might be due to his own or his master's carelessness, but that his success invariably depended upon his own determination to avail himself of all the opportunities of gaining experience which might come within his reach. Mr. Naden then passed on to review the subjects which an architectural student should endeavour to master, and to lay down the general principles which should guide him in his studies. Several other gentlemen having spoken, a hearty vote of thanks was unanimously passed to Mr. Naden for his able address, to which was coupled an expression of the pleasure with which the members welcomed him as President for a second time.

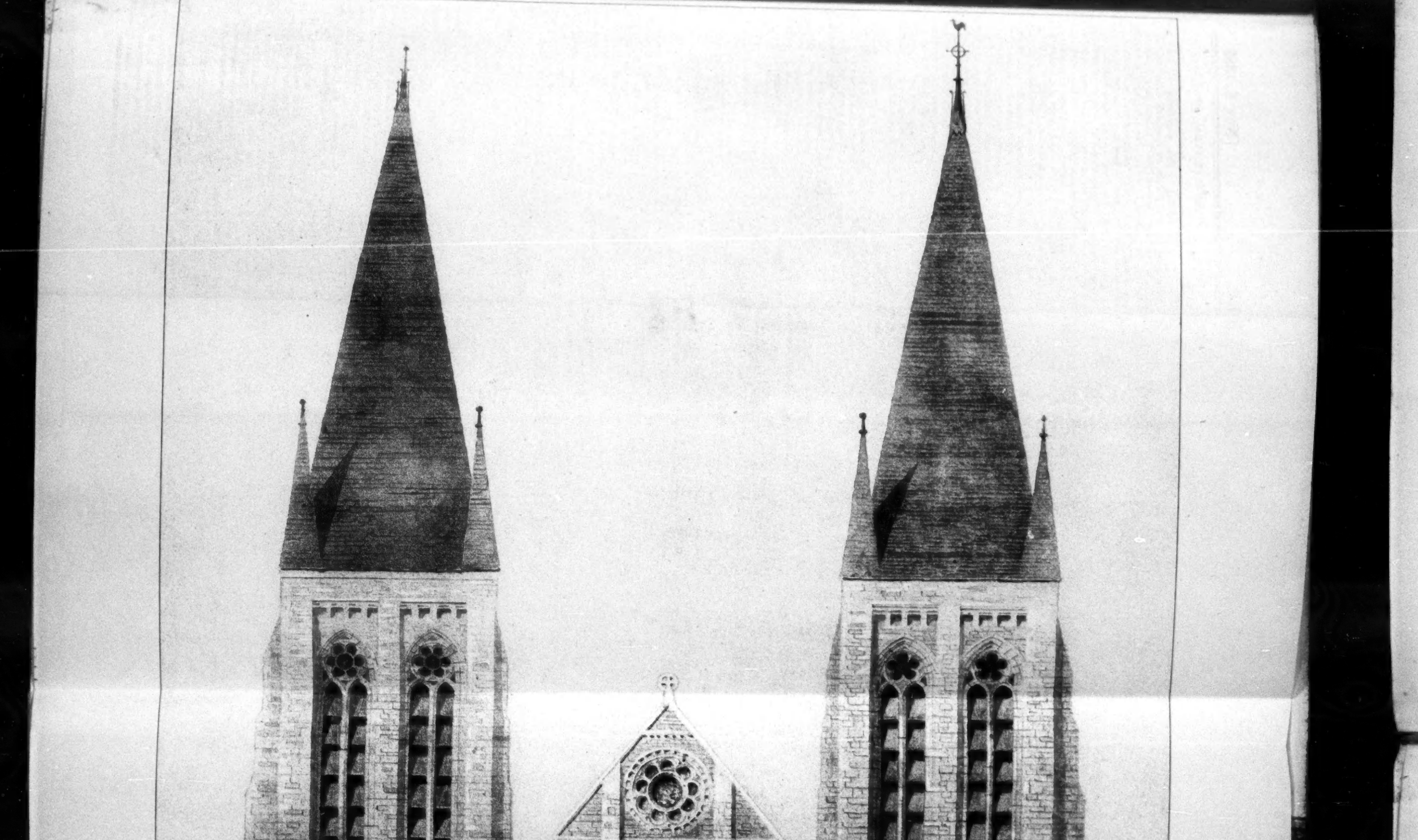
Manchester Architectural Association.—The annual *conversazione* of this Association was held on the 22nd ult., in the Lecture Hall of the Athenæum. There was a large attendance of ladies and gentlemen. Drawings illustrative of the architectural work of the past year were hung on the walls, and there were also exhibited a large number of specimens of work by various manufacturers. The annual address was delivered by the President, Mr. J. H. Woodhouse, who said that the *conversazione* inaugurated the fifteenth session of the Association, which now numbered eighty-four members.

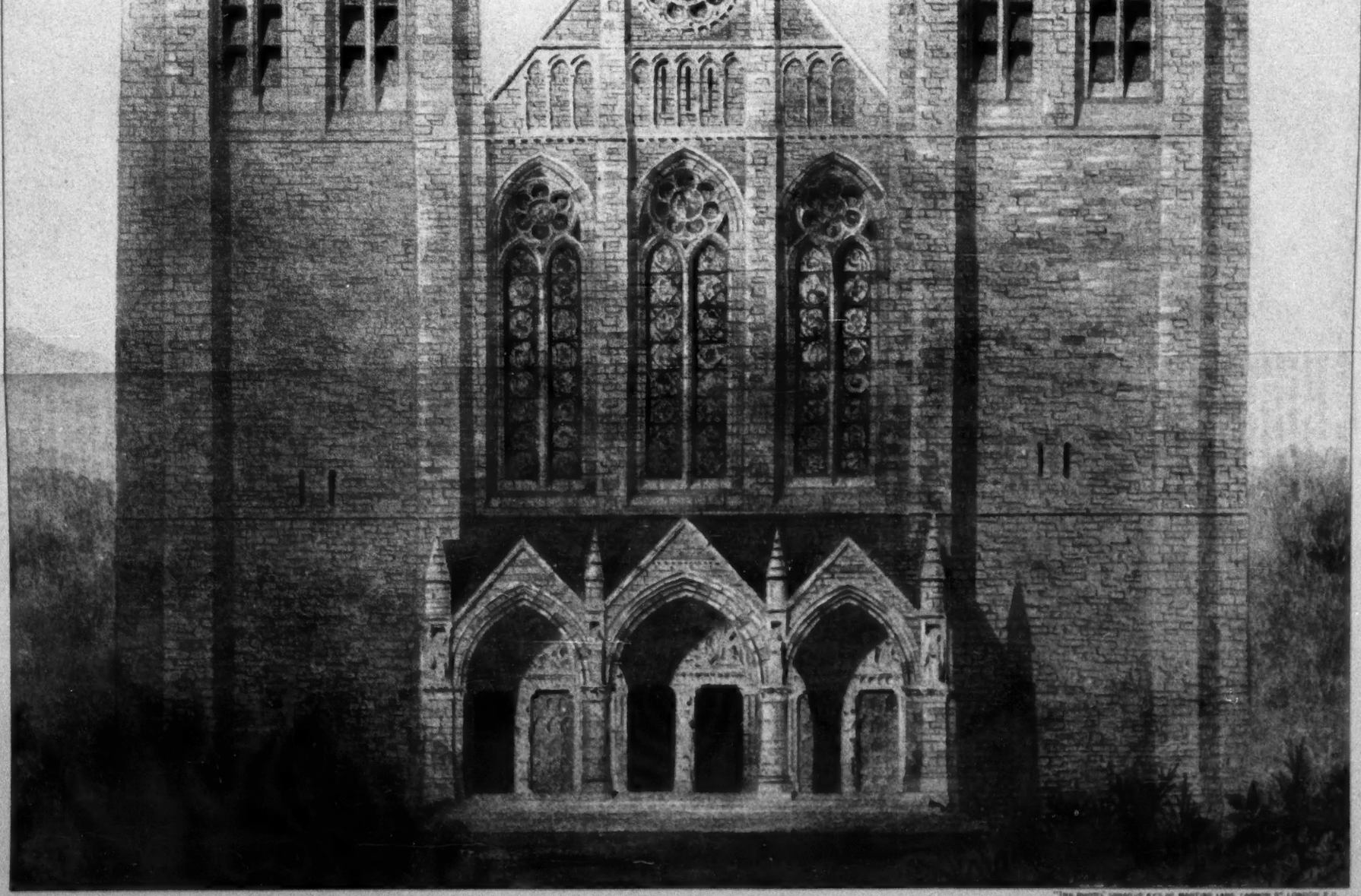
ENGINEERING SOCIETIES.

Association of Manchester Students of the Institution of Civil Engineers.—The opening meeting of the sixth session of this Association was held on the 23rd ult., at the Athenæum, Manchester. The President, Mr. J. Proctor, M.Inst.C.E., in the chair. The untimely death of the Past President, Mr. R. Vawser, M.Inst.C.E., who had been one of the best helpers of the Association, was referred to, and a vote of condolence with his family was unanimously adopted by the meeting. The President then gave his inaugural address, in which he drew attention to the objects of the Association, and to the education and training necessary to make good engineers, such as a knowledge of chemistry, geology, and the various branches of the drawing department, &c. He remarked that the usefulness and importance of the Association could not be over-estimated. He hoped that before long a paper would be read as to the cause of the high death-rate in Manchester and other towns, with suggestions as to the best means of reducing the same. Referring to the question of the purification of rivers, he expressed the opinion that action should be taken against owners of works on the rivers, as well as against local authorities. In conclusion, he drew attention to the excellent syllabus that had been arranged for the session. A vote of thanks was proposed by the hon. sec., Mr. A. D. Greatorex, Stud.Inst.C.E., seconded by Mr. A. W. Lawson, Stud.Inst.C.E., and carried unanimously, to Mr. Proctor, for his instructive and interesting address.

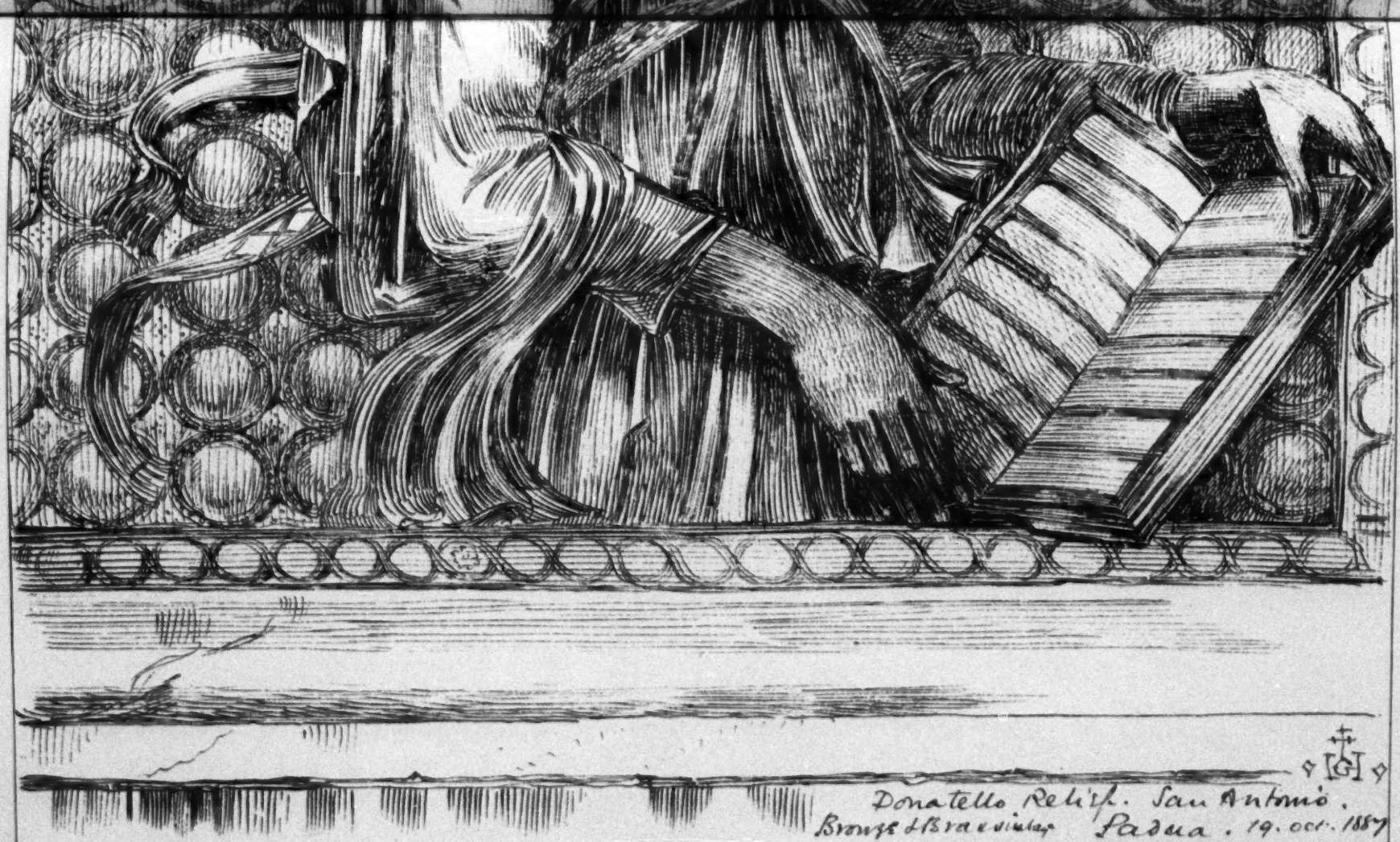
Liverpool Engineering Society.—The third ordinary meeting of the sixteenth session of this Society was held on Tuesday evening, in the Royal Institution, Colquitt-street. Mr. H. H. West presided. The principal business of the evening was the adjourned discussion on Mr. C. H. Beloe's paper entitled "Purification of water and sewage by the magnetic spongy carbon process," read to the Society on May 1 last.

Jerry Building in Stockholm. — The other day a three-storied dwelling-house in Stockholm collapsed, and examination showed that it had been erected upon a layer of clay, over-lying rock, without substructure of piles or solid fundamental work. Other houses on the same site are in a dangerous state.





WEST FRONT OF THE CATHEDRAL, HONOLULU.—Messrs. Carpenter & Ingelow, Architects.



Donatello Relief. San Antonio.
Bronze & Brazen Altar Padua. 19. oct. 1887

Drawn by Mr Gerald C. Horsley

PHOTO-LITHO SPRAGUE & Co. 22 MARTINS LANE, CANNON ST., LONDON, E.C.

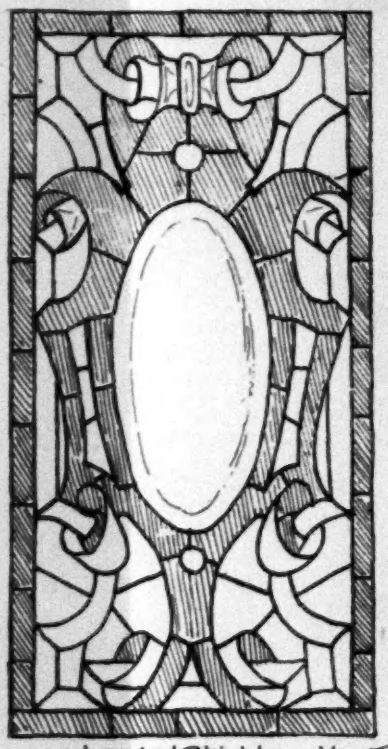
Sketches at the Arts and Crafts Exhibition

(852) Wrought-iron Sign by Shirley & Co.

(394) A Vase, Doulton-ware salt-glazed.

(64) Copper Repoussé Plate by John Pearson.

(282) Music Cabinet — by W.A.S. Benson.



(610) Leaded Shield - in Venetian & bevelled Plate glass.

(525) Lustre tile p
Figure panels by Wa

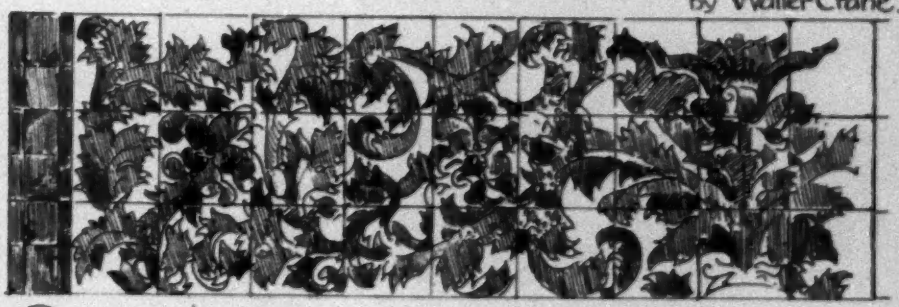
(242) Chimney-piece by Longden & Co.

arson.

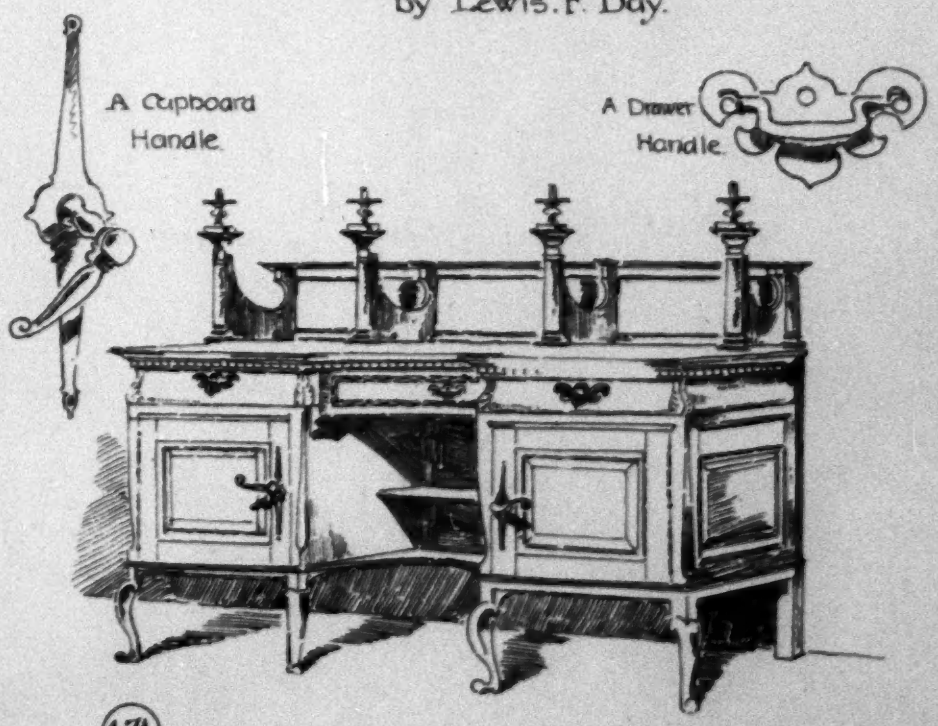
(33) Design for Cretonne.
by Lewis F. Day.

(84) Cartoon for stained glass panel for a Door.
by Walter Crane.

e panel.
by Walter Crane - Border by Lewis F. Day.



(326) Portion of a Frieze in Lustre Tiles
by Lewis F. Day.



(174) A Sideboard in Mahogany and gun-metal.
By Reginald T. Blomfield.

89. QUEEN'S GATE

THE

STAIRCASE

J.H. EASTWOOD
ARCHITECT
17 MECKLENBURG SQRE

THE SCHOOL BOARD FOR LONDON:

THE BUILDING CONTRACTS QUESTION.*

At the weekly meeting of the School Board for London, on the 24th ult., precedence was granted for the following resolutions of Mr. W. Roston Bourke:—

(1) "That the following resolution of the Board of August 1, 1889, be rescinded; and that the Board revert to the practice of publicly inviting tenders by advertisement as expressed in the resolution of the Board of December 17, 1885† :—

'That, in future, tenders for all works, the value of which exceeds 100*l.*, be invited only from a limited and selected list of builders.'

(2) That the following resolution of the Board of Feb. 21, 1889, be rescinded; and that the practice adopted previously in their resolution of Dec. 16, 1886,‡ be reverted to:—

'That tenders be obtained both for general repairs and painting, based upon schedules of prices renewable at the end of each two years, and that firms willing to carry out the work be appointed for divisions or groups of schools. That sub-letting be not allowed.'

(3) That the words 'divisions or groups of schools' in the above resolution of the Board of Feb. 21, 1889, shall be interpreted 'divisions or groups of schools numbering not more than six schools in each case, or two groups of schools under the charge of local managers.'"

Mr. Bourke, in moving the first motion, said it dealt with a question of principle. The system of open tenders was not broken down, as several members of the Board contended it was, referring him, in support of their contention, to the special report of the Committee on the Work of the Works Department. It had not been shown in that report that the bad work had been done under the open tender system, but he contended that all the bad work had been done by contractors appointed under the close contracts system. It was now said that the Board's work would be better done, because they had thorough supervision and selected tenders. He would ask whether the work would not be done better under the open system with "thorough supervision," or whether the work would be done better under the close system without "thorough supervision." If they had done their duty in the past with regard to supervision, they would not have had the complaints that there were in the special report of the Works Department. Mr. Bourke contended that the public were in favour of the open tendering system; the London County Council had adopted this system, and he had been told that they had seen no reason for adopting any other course. The Local Government Board always insisted that all tenders of upwards of 100*l.* should be advertised, and the Boards of Guardians and Local Boards had submitted to this order without ever protesting against it. What worked well all over the country ought to do for the London School Board. It was not the system that was wrong, but the want of supervision. Every respectable man ought to have the chance of tendering for the work of the Board.

Mr. Lobb seconded the motion. The Board had been misled. Some of the members had voted for the selected list of builders under a misapprehension, and some through inattention. The Board had been led to believe that the great scamping of the work was due to the open contracts. But that was not so. The Board had recently appointed a superior officer to look after the Board's interests in these matters, and the report of that officer showed that the bad work had been done under the close contracts system, as only two builders had been added to the list during the last four years. The close contracts system had been the curse of the Board, and it was time they had some alteration. They ought at least to give a fair trial to the open contracts system. Something like over four million pounds had been divided between twenty-one men under the close system.

Sir E. Hay Currie said he was perfectly sure that the open system of tendering was not the best for any body. Limited tenders, giving every respectable builder a chance of coming in and making out his case, was what they wanted. The Board, he contended, would get good work if they adopted a system of limited tenders, and he hoped they would not go back to the free system.

Mr. Lobb: We never had it!

Mr. Collins said the point was: Had every respectable builder in London an opportunity of getting on the Board's list, and, having got on the list, had they an equal chance of getting the work? He thought the Works Committee meant that the builders should have this opportunity, and this was all that Mr. Bourke and any of them wanted.

Mr. Helby said when he first came upon the Board he had heartily supported the open contracts system; but he had gradually come to believe that it was one of the worst systems they could adopt. Every builder in London could apply to the Works Committee to have his name put upon the list, and if his references were satisfactory his name was at once put on. Mr. Helby held that the report of the Committee on the Work of the Works Department dealt entirely with builders engaged under the open contracts system, and Mr. Lobb was certainly wrong on this matter. Mr. Lobb could take it from him that the Works Committee had carried out the order of the Board contained in the resolution with regard to open tendering. It was true there had only been two builders added to the list, and they had carried out the work so badly that their names were taken off, and would never be admitted again. The Board's Architect had told him that in his private capacity he should not go in for the open system of tendering; it was the worst form of tendering they could have.

Mr. Lucraft said he did not at all agree that small tradesmen were not able to properly do the work. It was not true to say so. He thought clerks of works ought to be appointed to only one school at a time, and not to two or three at distances from each other, as was often the case. It was impossible for them to see that the work was carried out properly when they had to leave one school to visit another perhaps two or three miles off. With regard to close competition, there had never been such a thing at the Board. They had always had a hundred builders on their list, and he hoped there would not be less than this number on the lists in future.

Mr. Helby: There is no limit.

The Rev. H. Curtis said the members who had attended the meetings at Anderton's Hotel, convened by metropolitan builders, were getting a good deal sneered at. But he thought that it was only right for members to hear and consider any grievance that any section of the ratepayers might have to lay before them. He had now heard both sides, and felt that he must vote against the motion. He had been led to believe at one of the meetings that the work of the Board was to be done by seven builders only, but from what he had heard that day from Mr. Helby, who was the mouthpiece of the Works Committee, this was not the case. All respectable builders could apply to be put on the list, and he hoped they would do so.

The Rev. A. W. Jephson moved the "closure," which was seconded by Mr. Dellow, and carried.

Mr. Bourke, replying shortly on the discussion, said Mr. Helby had made out his (Mr. Bourke's) case. Mr. Helby had admitted that only two contractors had been added to the list, as Mr. Lobb had stated; and these two builders, said Mr. Bourke, had never built any schools. The work had been done under the close system.

The motion was lost by thirty-seven to five.

Mr. Bourke, in moving Resolution No. 2 (printed above), said he thought that the small builders who had been dismissed, some of whom had done the work for many years and received no complaint with regard to it, should have a chance of appealing. He regretted that disparaging references had been made to the small tradesmen. There was a narrow-mindedness in thus talking of small builders, and comparing them with large firms. The small men ought to have a chance of getting on and so becoming large men.

Mr. Lobb, in seconding, described the "dismissal" of the small builders as a piece of heartless cruelty, and said it would result in a serious loss to the Board. He regretted the want of trust shown by the Board in their managers and the individual members, and ridiculed the idea of sending a man from Marylebone to Woolwich for the purpose of seeing to a lock.

Mr. Gover said the present system had not worked well, owing to the areas given to the contractors being too large. If a window was broken at Sydenham Hill School they had to send to Woolwich for some one to come and repair it. The price allowed for replacing a broken pane was a shilling, and, the distance from Woolwich to Sydenham being about ten miles, the man would have to come by train so as not to lose any time over the job. Sub-letting of contracts was not allowed, and, consequently, the contractor would let such a small matter wait till a larger job brought him to the neighbourhood, and so there was a considerable lapse of time before they could get the work done. The managers had looked sharply after these matters, and he advised the Board to continue to trust the managers with the work.

The Hon. E. Lyulph Stanley thought Mr. Gover's remarks should be addressed to the third resolution when Mr. Bourke moved it. He considered that under the present system the work was done as speedily as it was possible for it to be done.

Mr. Hart expressed himself in favour of the managers continuing to look after the small repairs to schools.

Mr. Barnes said he had heard nothing in the discussion to disabuse his mind of the belief that the work had been done well under the resolution of Dec. 16, 1886. There had been no complaint against the way in which the work had been done. Why, then, were these men turned over without any reason being given for so doing? Surely Mr. Stanley could not be really serious in saying that the work could be more speedily done by sending three or four miles instead of 100 yards. He hoped the Board would not allow the Works Committee to give the small repairs to the large firms.

The Rev. O. Mitchell supported the motion, complaining of the waste of time there had been in doing the work in Walworth under the present system.

Mr. Lynn pointed out that the second and third resolutions were alternative resolutions, and that the last would only be moved in the event of the second being lost, and that, therefore, members were right in discussing both the motions. He asked members to vote for motion No. 2 on its merits, without regard to motion No. 3.

Mrs. Maitland expressed herself in favour of the present system. She had been a manager, and when the resolution putting the work into their hands was passed, the managers of her division considered that it was impossible for them to properly carry it out. She wished to see whether the new system would work well or not.

Mr. Laing said he could only look upon this resolution as a sop to the deputation. He considered that the Board ought to give the new system a fair trial. They were practically going to have open tendering, and he thought they might rest satisfied with that.

Mr. Cook did not think the motion would have been brought forward if Mr. Helby had sought to extend rather than limit the list. He challenged Mr. Helby to show that his system was an economical one. He was not going to blame the whole of the men who had done the work for years because one or two of them had served the Board badly. The Board were the trustees of the ratepayers' money, the builders were ratepayers, and the Board ought to deal fairly with the matter.

Mrs. Besant thought the resolution might have been more clearly drawn up. She treated large and small builders on exactly the same ground, and had found there were faults with both sections. This motion, if passed, would throw the Board again into the position that had given them so much trouble. Talking about ratepayers had nothing to do with the question.

Mr. Helby said there had not been the slightest intention of dismissing any builder unless he had done his work badly. As to the managers, only a few of them had done the work thoroughly, and in these cases the bills had been sent to the committee with complaints of the enormous charges made for small repairs. The Board had not so much to do with saving as with getting the work done well. There had been serious delays in some cases in carrying out the work owing to the small builders not having the material at hand, and he had found that many of the workmen were most grossly under-paid. Under the new system the work was done quicker, as Mr. Stanley had told the Board, and there would be no delay in paying

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* See *Builder* for last week, p. 297.

† The resolution of the Board of December 17, 1885, referred to, is as follows:—"That at least ten days' public notice shall be given, by advertisement, inviting tenders for all future contracts for 100*l.* and upwards; and the Board shall require sufficient security for the due performance of such contracts."

‡ The resolution of the Board of December 16, 1886, referred to, is as follows:—"That the divisional member in charge of the school, or the local managers with the consent of the divisional member in charge of the school, be empowered to order urgent and slight repairs in schools up to a total amount not exceeding 4*l.* per department in any one year, commencing on the 25th March, 1887; and that the bills for such repairs (provided they do not exceed the above amount) be paid by the Finance Committee when signed by the correspondent and the divisional member in charge of the school."

the bills when they became due as was formerly the case. He asked the Board to give the system twelve months' trial. With regard to a contractor doing repairs at a distance, he left the question to the contractor who had undertaken to do the work, and the Board ought to wait and see how the contractor would manage it. In one case a contractor had not been able to pay the surveyor's fees, and such a man, Mr. Helby thought, was not fit to do the work of the Board.

Mr. Foster thought the present system was certainly open to amendment, and that the motion of Mr. Bourke ought to have been rather to the effect of requesting the managers to carry out work in a more efficient manner than it had been done by them.

On the motion of the Rev. A. W. Jephson, it was resolved:—"That the motion be now put."

Mr. Bourke, in reply, said the Board had overlooked the fact that workmen sometimes scamped their work against the wishes of their employers, and this remark applied to large men as well as small. After what had been said with regard to the managers, he thought they had better do without them, and manage the schools at head-quarters.

The motion was lost by twenty-nine to fourteen.

Mr. Bourke moved, and Mr. Lobb seconded, resolution No. 3.

Mr. Collins said he strongly supported this, as a protest against the work at Deptford being done by a man at Woolwich. He objected to the work of four Parliamentary divisions being given to one man.

Mr. Barnes said if this motion was passed, this sort of thing would still go on. There was nothing in the resolution to prevent one man having several groups. He moved as an amendment:—

"That the resolution of the 21st February, 1889, shall be interpreted in the following sense:—

'Where a division contains more than six schools, the Works Committee shall give separate contractors the general repairs and painting of schools in groups not exceeding six in number.'"

Mr. Lynn seconded.

Mr. Bourke accepted this amendment.

Mr. Helby moved the previous question. He said that contractors could not carry the work on the schedule prices with such a small number of schools. The men now doing the work would throw it up if this motion was carried, and he did not know where the Board would then be.

Mr. Sharp seconded. They had discussed this matter for something like three hours, and, after all, it was not an Imperial question.

Mr. Gover thought that the fact of the Board having discussed this question for so long was the very reason why something should be done.

On a division, the "previous question" was lost by twenty-six to sixteen.

Dr. Gladstone (vice-chairman) moved: "That the proposed resolution be referred to the Works Committee for consideration and report." He said everyone agreed that there should be a larger number of builders on the list; but he objected to the number of schools allotted to a contractor being so small as that mentioned in the resolution.

The Hon. E. Lyulph Stanley moved, and the Rev. R. Rhodes Bristow seconded, a motion for the adjournment of the discussion. This was carried by twenty-four to twelve.

On the motion of Mr. Helby, it was resolved:—

"That a reply be forwarded to the letter from the honorary secretary of the Committee of Representative Managers of London Board Schools (with reference to the discontinuance of the authority given to managers to order urgent and slight repairs), in accordance with the terms of the report."*

The Works Committee further reported as follows:—

"The Committee in their report, which was submitted to the Board on the 10th October, 1889, made various recommendations for the acceptance of tenders for carrying out the repairs to the schools and furniture of the Board on a contract schedule of prices, and added that the question whether it would be advisable to accept the tenders of Messrs. Grover & Son for both the Finsbury and the Hackney Divisions would be subsequently considered. The Committee now have to report that they are of opinion that the tender of Messrs. Dove Bros. should be accepted for the Finsbury Division, and the tender of Messrs. Grover & Son for the Hackney Division only."

This and the report of October 10 are held over pending the conclusion of the debate on the whole question.†

A special meeting of the members of the London building trade who have been moving in this matter was summoned for Tuesday evening last, at Anderton's Hotel, for the purpose of considering the action to be taken by them in order to gain success for their contention that there should be "a perfectly equitable distribution of all the work necessary to the schools," and their "right to participate in the execution of such work." The attendance was small, and the business was chiefly confined to the consideration of a report setting forth the action of the School Board in relation to the subject of contracts, and the steps taken by the committee since the last meeting of the members of the trade. It was resolved that a letter should be sent to each member of the School Board, setting forth a statement with reference to the request made in the memorial presented to the Board. It was also agreed that an effort should be made to obtain another interview with the Board, in order that they might, by rebutting statements and answers to questions, present their claims in a still clearer light.

* Printed in the *Builder* for October 19, pp. 277-78.

† We have condensed this report from the *School Board Chronicle* of the 26th ult.

CASES UNDER THE METROPOLITAN BUILDING ACT.

NEGLECT TO GIVE NOTICE.

At the Dalston Police-court, on the 21st ult., before Mr. Bros, Mr. Alexander Payne, District Surveyor of East Hackney (South) and North Bow, summoned Mr. G. W. Beale, builder, under the following circumstances:—Defendant had given notice by letter dated August, 1888, of his intention to extend the schoolroom of Hampden Baptist Chapel, South Hackney. This work was completed in the spring of 1889. The District Surveyor's account was sent in, and paid. In September, 1889, the District Surveyor discovered that new windows had been formed in some recesses in the chapel, and he wrote to the defendant requesting notice and full particulars of the work, which, however, he declined to send—hence these proceedings for neglect to give notice.

The defendant was represented by a solicitor, and maintained, first, that the works were covered by the original notice, and, secondly, that merely taking out the 9-in. filling of a recess and inserting a window did not affect the structure, nor was it work of a nature requiring a notice. He called the minister of the chapel to show that the work was constantly going on, but this witness admitted in cross examination that the order for these windows was not given till about July, 1889.

Mr. Hamilton, an architect, also gave evidence for the defence, and maintained that the work did not necessitate any alteration to the building. This witness, however, admitted that if the filling of the recesses were removed it was necessary to ascertain that there was an arch over the part removed, or to place one there, or the superincumbent wall would fall down. Also that the work could not be called a necessary repair under Section 9.

The Magistrate, in giving judgment, decided that this could not be called a repair or exempt under Clause 9, but was work for which notice ought to be given. Also that it was not covered by the original notice for extending the schoolroom.

The defendant was fined 20s. and costs.

IS NOTICE NECESSARY FOR REBUILDING PORTIONS OF AN EXTERNAL WALL AND CHIMNEY-STACKS?

At the Lambeth Police Court, on October 29, Mr. Banister Fletcher, the District Surveyor for West Newington and part of Lambeth, summoned Messrs. Briant & Son, builders, of 200, Kennington-park-road, under the Metropolitan Buildings Act, 1855, 18 & 19 Vic., cap. 122, sec. 41, for refusing to give notice for rebuilding the upper portion of the external wall and chimney-stacks, which had been taken down (under a Dangerous Structure Notice from the London County Council) at No. 8, Crampton-street, Newington Butts.

In the evidence it was stated that the quantity of wall rebuilt was about 22 ft. long and about 3 ft. 6 in. in height, and, in addition, two chimney-stacks—one containing three flues and the other two flues—and the District Surveyor called attention to the important fact, that in the rebuilding a portion of the work was contrary to the Act in thirteen other respects, and that when he received the notice asked for the examination would be made by him.

The builders were represented by counsel and solicitor, the former contending that the work was exempt under Section 9 of the Metropolitan Buildings Act, 1855, and that the case of "Badger *v.* Dunn," of 1858, governed the case, and that the late Mr. Ellison on that decision had dismissed a similar application.

The District Surveyor, in reply, pointed out that the case of "Badger *v.* Dunn" could not apply to the present case, because that case was based upon an alteration having been made, and the decision of the Court was "that no public good could result from notice being given," and he agreed that in that case there would have been no public advantage, because none of the work, which consisted of making-good decayed brickwork round a doorway, could have been done at that time contrary to the Act. Whereas in the present case it was of the greatest importance that the work should be superintended by the District Surveyor, because if not the rebuilding might be improperly done as regards the wall in eight distinct breaches of the Acts, and as to the chimneys in six. He called attention to a similar case in which Mr. Hannay had decided that notice must be given for rebuilding, and also to a decision of Mr. Chance in this Court over-ruling Mr. Ellison's. The decision was:—"That rebuilding one foot in height of chimney-stacks was work which came within the provisions of the Building Act, and that notice was consequently necessary."

Mr. R. J. Biron, Q.C., the sitting magistrate, decided that if no alteration had been made the work was exempt. He refused, however, the application to give costs against the District Surveyor, and agreed to grant the District Surveyor a case, as he desired to go to the superior courts.

LOW SIDE WINDOWS.

SIR,—Mr. J. S. Corder, in his "Wayside Notes in East Anglia" (*Builder*, October 26th), says:—"It seems to me this theory of lepers worshipping at these low side windows requires confirmation." I have long thought so. In the north of Italy and adjacent parts of Switzerland these low side windows are not uncommon in small isolated chapels and churches. They are usually at the west end to the left of the door, and are not at all intended for the use of lepers, but are used by any passer-by. The church being shut up when no service is going on, a person on his knees at the low window still has a full view of the high altar, and, in these small churches, of most of the interior. This window is not generally glazed, but merely protected with iron bars. May not this have been their use in England? They may occasionally not have been directed to the high altar, but to some special popular altar. I have seen a similar window in an old Gothic church in Sicily, also on the left of the west door.

G. S. PARRY (Lieut.-Colonel).

18, *Hyde-gardens, Eastbourne*,
October 28.

THE INSTITUTE AND THE ASSOCIATION.

SIR,—The short footnote which you appended to your report of Mr. Stokes's Presidential Address appears to me to contain a timely note of warning concerning a danger that we must be very careful to avoid in any steps taken in the direction indicated by the A.A. President. The danger I refer to is that of an absolute and complete amalgamation of the Institute and the Association. Such a course would, I am convinced, be productive of the greatest harm, and it is worth noticing how careful Mr. Stokes seems to have been in his address to avoid using any terms which might be interpreted into an argument for amalgamation. His whole address seems to have been based upon the admirable idea of the co-existence of two separate and distinct bodies, each independent of the other and under its own form of government, but at the same time working cordially together and helping each other wherever possible for the furtherance of the common cause.

The functions of the Institute are essentially of an examining nature, those of the Association of a teaching nature, and I venture to think that the Institute should neither directly teach, nor the Association directly examine. It is not hard to find precedents for this dual conduct of education. The Royal Colleges of Physicians and Surgeons and the Hospitals, the Universities and the Colleges, occupy an almost precisely parallel position, and was not the feeling that schools ought not to examine their own students the chief cause which led to the establishment of the Oxford and Cambridge Schools Examination Board?

There seems to be now a reasonable hope of ideas with regard to the future of the A.A., which many of us have, I think, for a long time, fondly indulged in, being brought within the range of practical politics. The Triple Examination of the R.I.B.A., the favourable reception which Mr. Stokes's courageous address has received, the appointment of the A.A. Education Committee, are all signs of the times which we cannot ignore, and which serve to indicate the direction in which public opinion is tending. At last there appears to be a probability of the great educational problem gradually and quietly approaching a satisfactory settlement, and it would seem a thousand pities if the good work that has recently been accomplished by the Institute, and that will, I believe, be accomplished by the Association, were to be marred by any imperfectly considered, though well-intended, schemes, either of the nature of an absolute amalgamation of the two bodies, or, I take the opportunity of adding, in the direction of restrictive legislation.

OWEN FLEMING.

London, Oct. 28, 1889.

IMPROVEMENTS IN THE STRAND.

SIR,—I must acknowledge the ready courtesy of Mr. Nevill in admitting the priority of Mr. Teulon's scheme for the above; but to fully justify my previous letter, I would beg space to correct an error into which he has fallen.

The plan for which I claim complete identity with Mr. Nevill's recent proposal I referred to as that "last amended by Mr. Teulon in 1882." The plan Mr. Nevill has seen, and upon which he bases his remarks as to the Strand portion, was a much earlier one. In the plan as last amended, Mr. Teulon had abandoned the suggested strip of garden and parallel roads on north and south sides of same from economic considerations, and proposed instead to widen Wych-street to 60 ft., and the Strand to 85 ft., leaving an eligible plot of building land between the two roadways, and dealing with the gradient of Newcastle-street by giving it a turn to the eastward, all exactly similar to that portion of Mr. Nevill's proposal. This statement you will be able to confirm by reference to the copy of the plan enclosed with my previous letter.

The scheme both for dealing with the Strand and for the main thoroughfare to Holborn is, as Mr. Nevill says, so simple as to require no advocacy; but it appears to me that too much publicity cannot be given to so simple a solution of this question, having in view the much more costly proposal at present under consideration by the London County Council, a plan of which appeared in your issue of the 19th inst. J. BROOKES HUNT.

Southsea, Oct. 28, 1889.

"TECHNOLOGICAL EXAMINATION": STAIRCASE.

SIR,—In reply to "Student," if the desire had been for an ordinary "dog-leg" staircase there would have been no occasion to mention the width of the hall; the object of mentioning its width and making it greater than the width of the staircase was to test the knowledge of the candidate and to see in what way he would treat the side of the staircase which would have no support from a wall. The use of such a staircase is that it enables a lift to be put against the wall, and where stairs are centrally placed more light is obtained for the tower floors than where the well-hole treatment is adopted.

Of course you are quite correct in your note; had the intention been to fill the whole width of the hall there must then have been a well-hole. I may mention that other students understood the question and answered it, I am glad to say, correctly.

October 28. THE EXAMINER.

"PAVING STONES IN THE PARIS EXHIBITION."

SIR,—I have read with interest the results of the experiments made with a view to test the various wearing capabilities of the named road materials.

It is not my intention to question the value of these experiments; but I wish to point out that your remarks on them are very misleading, for you state that the higher the co-efficient the better the material as tested by this apparatus. The very reverse is the case. Therefore, the materials which you state are acknowledged by most practical people to be amongst the best have their values confirmed by these experiments, the results showing that the Quenast comes out of the test the most creditably, being the best of the granites with the low co-efficient of 0·72, Mountsorrel coming fifth in the list with a co-efficient of 1·36, Guernsey tenth with 1·60, and Aberdeen thirteenth with 1·77.

I have before me a copy of report on experiments made in Paris with the same apparatus in May 1881, the results showing in this instance the Quenast to have a co-efficient of 0·30, and the best of the Guernsey tested a co-efficient of 1·21.

CHAS. M. MANUELLE.

*** "Co-efficient d'usure" is a rather ambiguous phrase, and we were informed by a French geologist with whom we inspected the collection that the higher figures represented the highest efficiency of resistance to wear. Our remarks, however, mainly turned on the inefficiency of mere laboratory experiments to give the true comparative practical values of paving stones in actual use. The construction put upon the matter by our correspondent furnishes an additional instance of this, for certain of the stones given in the table under "sandstones" have lower co-efficients than the granites, and if our correspondent's construction of "co-efficient d'usure" is correct, the table would give some sandstones as having higher qualities for road-metalling than granites, which it is not very easy to believe. So that we fail to see that "the materials which . . . . are acknowledged by most practical people to be amongst the best have their value confirmed by these experiments." It happens to be so with Quenast (which, by the way, is not a granite), but no one would contend that the Mountsorrel stone is better for road-metalling than Guernsey or Aberdeen, which it should be according to Mr. Manuelle's view.—ED.

MESSRS. O'BRIEN, THOMAS, & CO.'S CIRCULAR.

SIR,—Our attention has been drawn to a paragraph in your issue of Oct. 26 having reference to a circular we addressed to architects. The circular was addressed to two thousand architects in England, and the meaning you ascribed to it was somewhat different to what we intended. Although this large number was sent out, we only have had letters from two architects saying that it contained an objectionable offer, and to these gentlemen we have replied with explanations which they have deemed satisfactory. Under the circumstances, however, we consider our proper course is to issue an explanatory circular, at the same time withdrawing the former one, to all those architects to whom it was first addressed, which we are accordingly doing. We enclose for your inspection the original circular which we sent out, and we have marked one paragraph in red ink which we consider bears upon the last paragraph which you have quoted in your paper, and which, standing alone, is objectionable. We also enclose a copy of our explanatory circular. This circular will be sent to the whole of the architects who received our first circular this week. O'BRIEN, THOMAS, & CO.

*** We print Messrs. O'Brien, Thomas, & Co.'s letter, which we do not, however, regard as an entirely satisfactory explanation of the matter. The terms of the original circular appear to us capable of only one interpretation; and three architects sent it to us, drawing our attention to it in no measured terms, one of them, a man of recognised high position in the profession, characterising it as "perfectly scandalous." The reason that few protests were made against it is probably that most architects do not read circulars of the kind at all. A copy of the circular was, in fact, sent to the private address of the Editor of this journal, who threw it away without reading it, and only knew of its contents from correspondents who did read it. However, it is evident those who issued it are convinced they have made a blunder, and have felt bound to retract it.—ED.

[Since the foregoing was in type Messrs. O'Brien, Thomas, & Co. write to say that before issuing the circular in question they consulted an architect in the City (whose name they send), who informed them that in sending their price lists to architects it would be necessary for them to quote their trade discounts. No suggestion was made on either side that the trade discount would be paid to the architect as a commission for the introduction of business, but it was thought that architects would require that information.]

CHURCH-BUILDING NEWS.

Hornsey.—The new parish church at Hornsey is to be consecrated this morning (Saturday, Nov. 2), by the Bishop of London. The church affords accommodation for 1,250 persons, and has been erected according to the designs of Mr. James Brooks, architect. The first stone was laid in June of last year by Lady Magheramorne, whose husband, Lord Magheramorne, the former Member of Parliament for the division, has given towards the cost a sum of 1,000*l*. Exclusive of the tower, the spire, and west front, which it is not intended to proceed with at present, the church, with organ, has cost a sum of 15,000*l*., towards which 10,000*l*. has already been subscribed. The pulpit, it is of interest to note, has been erected by parishioners and friends as a memorial to Canon and Mrs. Harvey, the former of whom for upwards of half-a-century was the rector. The building, which is of Ancaster stone, the style of architecture being Perpendicular, has been erected by Messrs. Rudd & Son, of Grantham. We gave a double-page perspective view of the exterior of the church, with plan, in the *Builder* for May 12, 1888.

Llandaff Yard.—We are informed that the committee appointed to collect funds for the building of a new church to seat 250 at Llandaff Yard have accepted the designs of Messrs. Kempson & Fowler, architects, Llandaff, and have instructed them to carry out the work.

Llandow.—The restoration of the interesting little church at Llandow, near Cowbridge, Glamorgan, has now been commenced. The church will be fitted with new seats, prayer-desk, lectern, chancel-seats, and altar-table, all of oak; also a stone pulpit. The work is being carried out under the direction of Messrs. Kempson & Fowler, architects, Llandaff, Mr. John Morgan, of Llantrissant, being the contractor.

Salcombe (Devon).—Salcombe Church, erected in 1843 at a cost of 2,600*l*., consisted until recently (says the *Western Morning News*) of a nave and north and south aisles. Early last year it was resolved to add a chancel, sacristy, choir vestry, organ loft, and north and south porches, leaving a north transept to be built. The tender of Messrs. Farr & Son, builders, West Alvington, was accepted. As the work progressed funds came to hand better than was anticipated, and it was decided to omit the erection of the porches, but to add the north transept, thus making the work at the east end of the church complete. The architect is Mr. J. D. Sedding. The chancel is 31 ft. long by 20 ft. in width. It is divided from the rest of the church by an arch of a double order of chamfering on the west side, and of a single chamfer on the east side, and a screen wall under the arch 4 ft. high, with moulded coping 9 in. deep, and splayed plinth projection. Two clergy-desks and the choir-stalls, of oak, are the work of Mr. Trask, of Ilminster. The altar-rail is also of oak, supported by ornamental iron standards, supplied by Messrs. Longdon & Co., of London, the standards being of black and gilt fleur-de-lis. The east chancel window is of five lights, and is filled with stained glass in memory of the late Earl of Devon. The subject of the centre light of the window is the Crucifixion, the two lights to the north side being the Agony in the Garden and Christ bearing the Cross, the two lights to the south the Resurrection and Ascension; the rose light over represents Christ in Glory, whilst around this are symbols of the four Evangelists. The chancel steps are of Hopton Wood stone, and the chancel and sanctuary pavement of various marbles. The altar-table stands also on a raised dais of Hopton Wood stone and Devonshire marble. The wagon roof to the chancel is of ribbed oak, with very handsome carved oak bosses, designed by Mr. Edmund Sedding, nephew of the architect, and carved by Messrs. Farrs. The north transept is 17 ft. by 15 ft., and is separated from the chancel and the church by arches of Polyphant stone. It has an oak ribbed roof, and is seated with chairs. In this transept there is a stained-glass window of three lights. The subject of the centre light is the Good Shepherd, and is in memory of the late Lady Kingsale, and is the gift of her daughters, the Hon. Mrs. Stretton and the Hon. Mrs. Florence de Courcy. The subjects of the lights on either side of this centre one are St. James and St. John, and both are the gifts of Major-General and Mrs. Birdwood, of Woodcot, and are in memory of their two sons, Frederick William Lane Birdwood and William Ilbert Birdwood. To the south of the chancel are the sacristy and choir vestry, with the organ gallery over. The whole of the dressed masonry, both internal and external, and also of the windows, is of Polyphant stone. The dedication service took place on the 17th ult.

Proposed International Exhibition at Edinburgh next year.—We have received the prospectus of the "International Exhibition of Electrical Engineering, General Inventions, and Industries," which it is proposed to hold in Edinburgh in 1890. We are informed that the Executive have secured a site of about ninety acres in extent, within easy walking distance of the centre of the city, and possessing the very exceptional advantages of railway-stations belonging to the two great Scotch railway lines (the Caledonian and North British), within the grounds, thus enabling passengers from all parts of the kingdom to be set down within the Exhibition enclosure. Tramway lines also run to the entrances, and a canal, which will be utilised for the conveyance of visitors, skirts the grounds. It is anticipated that the opening of the Forth Bridge early in 1890 will attract numerous visitors, and these, added to the great stream of tourists, &c., which annually visit Edinburgh, will no doubt ensure a success still greater than that achieved for the Exhibition of 1886. The Exhibition will include Electrical Engineering, General Inventions, Industries, and Fine Arts. It is proposed to close the list of applications on December 1, 1889, the space at the disposal of the Council being already very largely applied for. A great number of the most interesting exhibits now at Paris will be shown at Edinburgh, including a selection of the extensive and unique collection of Mr. Edison. The classification comprises twenty-two sections, six being devoted to Electrical Engineering and Inventions, and fourteen to General Inventions and Industries, with special sections for women's and artisans' industries. There is also a separate section for Fine Arts. The general manager is Mr. Lee Bapty.

The Student's Column.

WATER-SUPPLY.—XVIII.

London Water-supply (*continued*).

IN 1867 another Royal Commission was appointed to inquire into the supply of large towns, with especial reference to London. In the evidence given before the Commission we find many plans and schemes devised, several of which, however, had been proposed on previous occasions. Foremost amongst these was the project of the late Mr. J. F. Bateman, C.E., F.R.S., to bring water from the mountainous districts of Wales about the sources of the river Severn, south of Snowdon, and to the east of Cader Idris and Plynlimmon. It was also proposed to add the water from the upper drainage grounds of the Banw and Vyrnwy rivers, immense reservoirs being constructed at suitable points. An artificial conduit was to convey the water to London. There could be no question as to the purity of the water, which was soft and excellent, and not liable to much pollution by reason of the non-populous districts, and little cultivation within the collecting grounds. The rainfall was large, and though the data for estimating it were rather scanty, the rocks within the area were shown to be practically impervious, so that the greater proportion of what fell might, with due engineering skill, be collected and utilised. The ground is at such an elevation that, notwithstanding the gradient of one foot fall per mile to bring the water, it was anticipated that nearly the whole metropolis could be supplied without pumping, from large reservoirs to be made at Stanmore, near Edgware, 270 ft. above sea-level. The works of existing companies were proposed to be utilised as much as was economically practicable.

Mr. Hamilton Fulton developed a plan to take the water from the upper portion of the Wye, in Mid-Wales.

Messrs. Hemans and Hassard propounded a gigantic scheme to supply the metropolis with water from the lakes of Cumberland and Westmoreland, taking advantage also of certain drainage areas should these latter be required. Ullswater, Thirlmere, and Haweswater were the chief sources to be laid under contribution, and the water was to be conveyed by a conduit running through the Midland counties to London, supplying some large towns *en route*. The other main features of the scheme are somewhat similar to those of the Welsh project just alluded to, but it was believed that the rainfall could be calculated more accurately in the Lake district proposal.

Mr. George Remington suggested the utilisation of the high ground of Derbyshire, collecting the water above Mill Dale, on the river Dove, and bringing it to a reservoir to be constructed at Barnet.

So it would appear that engineers had carefully considered methods of supplying the metropolis from all mountainous districts which could be regarded as being capable of yielding the necessary amount of water by gravitation. But the public, eager as they were for a wholesome and copious supply of the precious fluid, had to contend with those who had certain rights and interests in the respective districts, and who (as in all such cases) would form a formidable opposition. Other powerful arguments militating against any scheme which included the bringing of water from a very long distance were also urged. For instance, it was not thought particularly desirable that the whole of the metropolis should be dependent on long conduits for its water, as awkward contingencies might arise by reason of foreign military occupation, or wanton mischief on the part of even a single individual, when we should be completely at the mercy of any one who was able to obtain possession of a short length of the aqueduct. Moreover, accidental interruptions to the conduits, or to the flow of the water, would be serious things, the City having only the quantity of water in the service reservoirs to fall back upon. The enormous expense attending the construction of the various works, the Commissioners reported, would be a great tax on the ratepayers. The Commissioners were also of opinion, that no town or district should be allowed to appropriate a source of supply which naturally and geographically belonged to, and might prove useful for, a town or district nearer to such source, unless under special circumstances. In this connexion, it is interesting to note that, since the expression of this opinion, the Welsh and Cumberland sources have actually been, to a certain extent, captured, the former by Liverpool and the latter by Manchester, showing how just the prediction was.

Attention was, therefore, not unnaturally directed to the consideration of other sources of supply. Believing that Thames water became more and more polluted as it flowed on from its source, it was generally assumed that by the time it reached Hampton it was more highly impregnated with obnoxious matter than at places higher up the river. Engineers therefore proposed to take the water from it and its tributaries at higher points. Many of the schemes were novel in their way, but generally involved bringing the water long distances. Besides, it became known that they were based on erroneous assumptions as to the actual pollution of the water, and many of the conditions which necessitated a different source of supply were not complied with, so long as Thames water in its ordinary filtered state was used at all. Some of these new suggestions were merely intended to increase the output of individual companies, and were, therefore, beside the mark. It was proposed to utilise the water from the springs issuing from the chalk, and other pervious beds. As we have seen, the New River and Kent Companies had already drawn upon the chalk formation. One thing was tolerably certain as to the chalk water, viz.,—that its quality in regard to freedom from the baneful effects of sewage, was excellent; and this was an item of considerable importance. This question is sure to crop up in respect of the future water-supply to London, and instead of being altogether retrospective in our remarks, we may now consider it in its present bearings.

It is calculated that of the rain which falls in the upper drainage area of the Thames, only about one-third reaches Hampton. The remainder is absorbed by the pervious layers on which it falls, by percolation into the oolite, sand, and chalk, which form about two-thirds of the area, by draining into other river basins underground, and by evaporation. The manner in which these various agencies are brought about has been already alluded to. It is most difficult to estimate the amount of water actually absorbed by each pervious formation; we may arrive at a rough approximation of the total quantity taken up by all of them, but we are not justified in drawing conclusions as to supply, from such general data; neither do we know the proportion of the water available to the amount absorbed. Springs issuing from the strata can be gauged, and with certain precautions included, but it yet remains to be shown how exhaustive pumping in wells within the area, would affect these springs, and this is a serious item. So long as the springs themselves, as they issue from the ground, are utilised, their volume would, of course, be unaffected, for it would only be robbing the rivers; but bearing in mind what we have said about springs, we recognise that in most instances they are only kept going by being fed by surplus rain which they throw off. If, therefore, we make wells, and draw off the surplus, or, in other words, lower the saturation level, the time must come when there will be comparatively little surplus water thrown off, and the springs be much reduced in volume. We cannot get the same water above and below too. Even already the pumping for private and public supplies has very much lowered the average level of saturation, in the metropolitan district. What, then, would be the effect on this level if all the water used in the metropolis were taken from the same source? The population of the City at present might not, perhaps, be large enough to exhaust it, although many of the wells now in use would certainly run dry. But in effecting any material change in the source of supply, it must be sure in its result, and as permanent as possible,—the tax-payers ought not to be burdened with the expense of such a doubtful undertaking as that of obtaining the whole supply from the chalk which provides neither the one nor the other. The chalk under London is extremely useful in supplying private establishments with water, and it should remain so.

In dealing with underground sources in the vicinity of the metropolis we have confined our attention to the chalk, for although water may certainly be occasionally met with in lower beds (the "Lower Greensand," for example), recent experience has shown that this cannot be depended upon,—at any rate for a large supply. This follows from the manner in which the beds are disposed, for although they are thick and have a tolerably broad outcrop many miles from London, by the time they reach the metropolitan area they are known to become very thin and comparatively unimportant, some of them being altogether absent. A ridge of hard old rocks of an impervious nature stretching from Prussia through Belgium (where they are seen not only in the Ardennes but have been proved by borings for water to the northward of those mountains), passing under the North Sea, have been met with, at a great depth at Harwich and Ware, and have been proved to exist at Chatham and, generally, under London, eventually cropping out in the north of Somersetshire and running from thence into South Wales and the South of Ireland.

This broad elevated underground expanse of rock materially influences the method of distribution of the water which percolates into the oolites and other secondary beds under the chalk in the upper part of the basin of the Thames. These beds do not come on to London laden with the precious fluid they have imbibed, but thin out, merely sending a representative by way of apology, in the shape of one of the oolitic beds. Moreover, their lithological character is not the same throughout, and their value as water-bearing strata varies accordingly. Bearing in mind the great complexity of the subject, the irregularity of the distribution of the beds underground, our slight knowledge as to the actual amount of surface and rain water absorbed by individual beds, and our absolute ignorance as to what really becomes of much of the water so absorbed, we cannot refrain from cautioning those who look to a deeper seat for our water-supply than the chalk. We have seen that the chalk is not, in all probability, sufficient as a permanent supply, and we reluctantly come to the conclusion that the bulk of the drinking water of the metropolis must still be obtained from the surface.

The objections raised as to the inconvenience attending the bringing of water from long distances are not, perhaps, so strong as they were before the experiment had been successfully tried in recent times on the continent and elsewhere; but it, nevertheless, is far preferable, for many obvious reasons, to have the seat of supply as near at hand as possible.

In considering the progress of the water companies, allusion has been made to the amount of water per day flowing in the Thames past Kingston, and of the relative amount artificially abstracted. The consumption is naturally much greater now than at the time when this comparison was first instituted, as may be seen on reference to the returns of the Registrar-General. We do not desire to further enter into the discussion as to the minimum quantity of water in the river at the places of intake. It seems tolerably certain that the tremendous quantity abstracted, causes the river to be much lower than it would otherwise be, at certain periods of the year, but it seems rather absurd to argue from such premises that the Thames is incapable of yielding the required quantity. Assuming that the mud flats exhibited at these periods are really due to this abstraction, surely this state of things could be largely remedied by constructing immense storage reservoirs (such as many of the cities in the north of England are compelled to do), and filling them in times of flood. This means great expense, and much scientific skill would be required to keep the water good, still we believe it could be done by refilling the reservoirs at every available opportunity. The connexion established between the rainfall of the upper Thames basin, and the height of the river at the places of intake, might be taken advantage of, to indicate the times when it would be advisable to draw off the water.

Cement on Wood.—Wood, says the *Bauzeitung*, which is to be coated with cement, should be rough, not smooth. The best coating is produced by the mixture of one part of cement, two parts of fine sand, and one part of curdled milk. Not more should be made of the composition at the time than can be laid on in half-an-hour, and during its application it should be stirred continually, so that the sand does not settle. It is better, with the object in view, to apply two coatings, the second being the thicker. Such a coating adheres well to wood, and affords a good protection against rot, and even, to some extent, fire. Another method is to mix good fresh cement with curdled milk until attaining the thickness of oil paint, and then apply it to the wood.

VARIORUM.

"THE GENERAL HISTORY OF PRINCIPLES OF SANITATION," by Sir Edwin Chadwick, K.C.B., is a reprint in the form of a sixpenny pamphlet (London: Cassell & Co.), of the address recently given by the author at the opening meeting for the present session of the Sanitary Institute, and noticed in our columns on the 12th ult. ——"The Chrysanthemum Number" of the *Gardeners' Magazine* (published at 4, Ave-Maria-lane, London) is a double number. It contains an interesting history of the chrysanthemum in Europe, and "a chrysanthemum portrait gallery," including portraits of many of the most notable English, Continental, and American growers of, and writers upon, this flower. The "history" before mentioned is by Mr. C. Harman Payne, whose name and fame as a writer on horticulture entitle him to speak with authority. It seems that while the present year has been fruitful in centenary celebrations, "not the least important, so far as horticulture is concerned, are the special exhibitions organised in England, Scotland, and Belgium, to commemorate the hundredth anniversary of the introduction of the chrysanthemum into Europe,"—that is to say, "of the importation of the first of the large-flowering species." In connexion with this celebration, a "Chrysanthemum Conference" is to open at Chiswick on Tuesday next, November 5. The publication under notice contains a double-page plate of the Roubaix specimen of the "Fair Maid of Guernsey" (a variety of the plant grown with much success by M. Phatzer, of Roubaix), besides several well-executed wood engravings of other varieties of the plant; and altogether it is a seasonable and welcome production.——The number of "Cassell's Magazine" for November concludes another volume of that excellent illustrated serial. The paper on "The Winter Dress of Men and Women," by "A Family Doctor," contains a great deal of common-sense concerning clothing in its sanitary aspect. "Curiosities of Footgear" is an illustrated article dealing with the archæology of sandals and shoes. The paper on "Bent Ironwork," by E. Crossley, is (like the specimens illustrated) rather slight. "What *not* to do in a Sick-Room, by "A Nurse," may be read with profit by many people.——"The Leisure Hour" for November (London: 56, Paternoster-row) is the first part of a new volume. It contains an interesting paper by Mr. W. J. Gordon on "The Lighting of London": this is mainly taken up by a sketch of some of the arrangements now in progress for lighting considerable districts of London by means of electricity. "Etymological Doublets," by Alfred Erlebach, and "About Germs," by Alfred Schofield, M.D., are both very readable papers.——"The Sunday at Home" for November (same publishers as the foregoing) also commences a new volume. It contains an illustration of a large terra-cotta relief by Mr. George Tinworth, entitled "Christ before Herod," at present in Messrs. Doulton's show-rooms at Lambeth. The contents also include a paper on "Bell Mottoes," some of which are very curious. At Bruton, Somerset, according to the writer, there is a bell inscribed

"Once I'd a note that no one could beare,
But Bilbie made me sweet and clear."

Assuming the inscription to be true (notwithstanding the statement that "this Bilbie" was "a man of much conceit," and "a caster of many bells with mottoes glorifying him"), it were to be wished that Bilbie could re-cast some of our London suburban church-bells.——The "Girls' Own Paper" and the "Boys' Own Paper" are, both of them, excellent magazines of their kind. They commence new volumes with the November parts, and are published at 56, Paternoster-row.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

17,052, Cowl for Chimneys, &c. J. Laming.

In order to prevent down-draught, chimneys or shafts are, according to this invention, constructed with a hollow cone, open at the base, suspended in a central position immediately above the chimney-pot or terminal of the flue. The cone is sustained by a strut, and an open frame is also fitted round the cone to prevent its loss in high winds. The base of the cone is of larger diameter than the chimney-pot or other terminal, and when unaffected by the wind is concentric with the flue, and slightly above it. When acted on by the wind the weather side of the base of the cone is driven against the terminal of the flue, and the escape of smoke and air takes place on the lee side, the cone having a pendulous motion. The terminal of the flue is fitted with an indiarubber ring to render the contact of the cowl silent, and to prevent vibration.

11,668, Fire and Sound proof Plastering. W. Doehring.

The surface of the wall or ceiling is, according to this specification, first covered with an easy-hardening fireproof layer, a mortar mixed with soluble glass. Before this hardens, coarse gravel is spread over it; this holds the finishing plastering, which consists of a porous material made fireproof by impregnation. By the composition of these three layers a fireproof, sound-subduing, light, and porous covering is made, which, when heated by fire, for instance, does not peel off and crack, and is a bad conductor of heat, so that walls and ceilings which are plastered with this material are cool in summer and warm in winter.

12,415 and 12,417, Wood Screws. C. D. Rogers.

These specifications relate to a screw with one or more threads or spiral grooves impressed into the metal of a screw, and with threads raised or made between the grooves and surface of the blank by the compression and displacement of the metal in forming the grooves.

13,326, Heating and Ventilating Apparatus. W. R. Maguire.

This apparatus provides the use in combination of a suitable arrangement of furnace or furnaces, and a heating chamber of a series of tubes open at both ends and arranged vertically round the walls of a chamber to receive the radiant heat from the furnaces and communicate it to the air around and about them.

13,474, Scaffolding. W. Ebeling.

According to this invention, a scaffolding for repairing, straightening, or building chimney stacks, or for fixing lightning conductors to them, is constructed by the use of ladders, hooks, and trestles of iron or wood in such a manner that from the ground upwards, by means of ladders, hooks are driven in on both sides of the upper end of the ladders, on which trestles are hung, and on which again boards are laid, these boards being used for the resting point of another ladder.

NEW APPLICATIONS FOR PATENTS.

Oct. 14.—16,120, H. Le Mesurier and W. Dart, Fastenings for Emergency Exit-doors for Theatres, &c.

Oct. 15.—16,177, H. Cole, Automatically Retaining in position Windows and Doors.—16,178, H. Hardy, Water-closets.—16,183, H. Smith, Fastener for Window-sashes, &c.—16,192, C. Broad and C. McCann, Metallic Sills for Window and Door Frames and Casings.—16,201, W. Sayer, Air Propellers or Ventilating Fans.—16,215, A. Boult, Metallic Crossbars and Rails for Window-sashes, &c.—16,218, M. Rogers, Securing Window-sashes in any required position.

Oct. 16.—16,301, S. Hill, Door-closing Springs and Checks.—16,312, D. Waddell, Closing Ladder.—16,327, G. Jerram, Paving.—16,335, W. Bird, Jun., Self-closing Door Apparatus.—16,340, W. Ayres, Sash-weight Moulding Machine.

Oct. 17.—16,363, J. & A. Duckett, Clay Mills.—16,372, J. Mander, Sash-fasteners and Openers.—13,398, F. Stewart, Mitre Clamps.

Oct. 18.—16,516, J. Shenton, Machines for Making Bricks, Drain-pipes, &c.—16,519, W. Minns, Cutting Window Lead for Stained-glass Windows, &c.—16,527, W. Meakin, Attaching Sash-lines to Sashes.—16,536, H. Hall, Tiles for Lining Walls, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

3,781, R. Franklin, Bolts, &c.—7,646, H. Kefersheln, Brickmaking Machines.—9,524, D. Knowles and E. Raybone, Sash-fasteners.—12,263, H. Barnett, Sash-fasteners.—14,471, G. Baldwin and F. Varley, Door-knockers.—14,499, R. Hannan, Protecting Windows, Doorways, &c.—14,567, C. Thomerson, Fixing or Supporting Head-pipes, &c.—14,723, F. Fehse, Decorative Tiles, &c.—14,733, D. Nicoll, Waterproof Slabs and Blocks.—14,739, J. Sim, Casement Fittings, &c.—14,768, W. Snelgrove and W. Avery, Fastenings and Guards for Doors.—14,772, A. Haughton, Gates, Doors, &c.—14,778, J. Macmeikan, Coping-bricks.—14,797, R. Barton, Paints, &c.—14,877, H. James, Girders for Bridges, &c.—15,093, R. Wilford, Screw-fastenings for Windows.—15,131, C. Cross and A. Ashwell, Indicating-fastenings for Doors.—15,194, E. Harrison, Revolving Window-shutters.—15,250, J. Bower, Door-latches.—15,355, S. Hill and R. Hodges, Automatic Combined Catch and Bolt for Double Doors.—15,367, J. Kidman, Bakers' Ovens.—15,385, W. Whitham and F. Dawson, Combined Bolt and Door Prop.—15,411, D. Gill, Perforating and Fixing Slates.—15,593, A. Brookes, Veneers.—15,713, T. Holliwell, Ventilating the Roofs of Railway Stations, &c.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

13,632, R. Platt, Automatic Retaining-catches for Doors, &c.—15,022, R. White and P. Ayton, Door-furniture.—16,155, J. Thornton, Fireplaces.—16,354, R. Taylor, Concrete Mixing Machine, &c.—18,371, H. Illingworth and S. Rushworth, Screw Nails.—18,912, A. De Villepigue, Levelling Apparatus.—10,032, G. Bellingham, Fastenings for Doors and Windows.—14,282, H. Leach, Door-bell Mechanism.—14,515, A. Paris, Cloth-covered Plaster Blocks for Ceilings, Walls, &c.—14,664, A. Rockwell, Door-bell Mechanism.

RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

Oct. 16.—By HUMBERT, SON, & FLINT.

Rickmansworth—Two f. houses in High-st., r. £56 p.a.	£1,580
The f. residence "Waimarino," r. £50, p.a.	680
F. cottage and blacksmith's shop, r. £31 p.a.	600
Croxley-green—A plot of f. land	120

Oct. 17.—By FARRERBROTHERS, ELLIS, & Co. (at Esher).

Esher—F. house and shop in High-st., r. £45	880
Two f. houses in High-st.	1,210
A.f. house and shop in High-st.	900
Two f. houses in Church-st.	2,020
1 to 7 Park-rd., f., r. £107, 6s., p.a.	1,355
Holme-cottages—P.g.r. of £8, with reversion in 74 yrs.	220
Park-rd—F.g.r. of £28, with reversion in 76 yrs.	710

Oct. 18.—By W. HALL.

Battersea—33 and 37, Ingrave-st., u.t. 60 yrs., g.r. £7	415
Upper Holloway—13 and 15, Hampden-rd., u.t. 95 yrs., g.r. £12	460

By P. D. TUCKETT (at Derby.)

Ashbourne—F. pasture and meadow land, 25a. 3r. 9p.	1,250
"New Close Farm," 66a. 3r. 22p., f., r. £190 p.a.	5,000
Enclosures of f. land, 53a. 1r. 21p.	2,930

Oct. 19.—By D. Watney & Sons (at Newport).

Pontypool, near—Two plots of land, 2a. 3r. 38p. c.	700
Enclosures of c. land, 20a. 0r. 30p.	610
A plot of garden land, 0a. 1r. 19p., r. £10	130
Two cottages and 2a. 0r. 19p., r. £14 p.a.	400
"Cwmffrwdoer Farm" and 24a. 3r. 17p., r. £28 p.a.	500
"Talochor Farm" and 11a. 0r. 21p., r. £15 p.a.	330
One-fourth share of c. land, 15a. 0r. 8p.	220
"Pentrepiod Farm" and 42a. 2r. 30p., r. £48 p.a.	1,020
Three plots of c. building land, 7a. 0r. 33p.	630
"Lasgarn Farm," 53a. 1r. 33p., f. r. £33. 15s. p.a.	920
Thirty-one f. cottages, r. £161. 4s. p.a.	1,180
A copyhold plot of land	21
"Oswood Cottage," r. £12, leasehold	115

Oct. 21.—By BLAKE, HADDOCK, & Co.

Croydon—Nos. 12 to 20 (even), Park-lane, f., area 2 a., r. £100 p.a.	3,100

By G. STOCKINGS.

Soho—62, Frith-st., f., r. £90 p.a.	1,900
Fulham—6 to 14 (even), Pellant-rd., u.t. 89 yrs., g.r. £31. 10s.	925
Sydenham—The residence called "St. Ronan's," f., o.r. 75 p.a.	800

By H. W. ILES.

Clapton—79, Median-rd., u.t. 75 yrs., g.r. £6	315

By R. WOOD.

Forest-gate—11, Fowler-rd., f., r. £30 p.a.	250
Marylebone—68, Lisson-grove, u.t. 51 yrs., g.r. £9.	600

Oct. 22.—By HALL & GOULD.

Sevenoaks, near—1 to 7, Hope-cottages, u.t. 90 yrs., g.r. £14, r. £80 p.a.	135

By G. B. SMALLFIELD.

Barnes—1 and 2, Lawrence-cottages, f., r. £44 p.a.	925
Lower Clapton—27 and 29, Chatsworth-rd., f.	1,180

By DEBENHAM, TEWSON, & Co.

Forest-hill—F. house and laundry, area 5,700 ft.	860
Spitalfields—11 and 12, Steward-st., f., r. £115 p.a.	1,500
38, 39, and 40, Gun-st., f., r. £107 p.a.	1,310
18, Steward-st., f., r. £40 p.a.	690

By MANSELL & ROWE.

Norwood, Farquhar-rd.—The residence called "Hillside," u.t. 48 yrs., g.r. £20. 10s.	1,510

By F. J. BISLEY.

Peckham—190, 192, and 194, Queen's-rd., u.t. 60 yrs., g.r. £12	1,050
196, 198, and 200, Queen's rd., u.t. 60 yrs., g.r. £13	1,010
Bermondsey—32, Longley-st., u.t. 80 yrs., g.r. £5	435
Rotherhithe—274, Rotherhithe New-rd., u.t. 58 yrs., g.r. £5	230
2 and 4, Chilton-st., u.t. 34 yrs., g.r. £8	360
12 and 14, Plough-rd., u.t. 50 yrs., g.r. £5	390
291 to 303 (odd), Lower-rd., u.t. 33 yrs., g.r. £31. 10s.	1,435

Oct. 23.—By J. H. HUNTER.

Hyde-pk.—34, Orsett-ter., u.t. 53 yrs., g.r. £10, r. £115	1,310
4, Tavistock-rd., u.t. 67 yrs., g.r. £8, o.r. £105	1,350
6 and 20, Tavistock-rd., u.t. 67 yrs., g.r. £15. 10s., r. £160	1,335
Bayswater—L.g.r. of £95, subject to a g.r. of £3 for 67 yrs.	1,705

By FARRERBROTHERS, ELLIS, & Co.

Mitcham—1 and 2, Crieff-villas, f., r. £78 p.a.	1,100
Esher, West end—Four cottages and 15a. 2r. 2p., f.	1,800
Hersham—F.g.r. of £30, with reversion in 92 yrs.	720
An enclosure of f. land, 6a. 0r. 30p., r. £11. 10s.	360

Oct. 24.—By BRADEL & Co.

Southend, High-st.—Eight plots of f. land	4,230
Tyler's-avenue—Nine plots of f. land	2,240
Paddington—14, Sovereign-mews, u.t. 31 yrs., g.r. £25, r. £75 p.a.	640

By JENKINS, SONS, & ELLIS.

Hammersmith—58 to 68, Brook-gr., u.t. 24 yrs., g.r. £19	1,160

By J. H. DEBNELL.

Hammersmith, Margravine-rd.—A plot of land, 2a. 2r. 38p., f.	5,410

By GLASIERS & SONS.

Canada—The Huntington Copper Company's mines, with all rights, works, plant, and machinery	1,600
Camberwell—60 and 62, Church-st., f., r. £62 p.a.	1,085
Barking—52, Heath-st., "Blue Anchor" Public-house, f., r. £16 p.a.	230

By C. C. & T. MOORE.

Mile-end—80 to 90 (even), St. Dunstan's-rd., u.t. 74 yrs., g.r. £18. 18s.	850
Commercial-rd.—F. stabling in Steele's-lane, o.r. £20 p.a.	300
Hendon, Marion-rd.—Two plots of f. land	44

By H. J. Bliss & Sons.

Bethnal-green—20 to 26 (even), Hague-st., f., r. £106, 12s.	£1,830
28, Hague-st. and 26, Sale-st., f., r. £57. 4s.	820
South Kensington—12, Gilston-rd., u.t. 42 yrs., g.r. £7. 7s., o.r. £20	680
Victoria-pk.—15 and 16, Rocke-st., f., r. £31. 4s. p.a.	265

By Newbon & Harding.

Hornsey—45 to 51 (odd), Lightfoot-rd., f., r. £125	1,050
A plot of f. land in Lightfoot-rd.	300
Stoke Newington—57, Mayville-st., u.t. 70 yrs., g.r. £5, r. £33	180
2 Evering rd., u.t. 86 yrs, g.r. £8. r. £50	600
New Southgate—13, 14 and 15, The Avenue, u.t. 80 yrs., g.r. £15, £47	100
Commercial-rd.—34, 36, and 38, Anthony-st., u.t. 11 yrs., g.r. £7. 2s. 6d.	310
Canonbury—44 and 46, Halton-rd., u.t. 20 yrs., g.r. £14., r. £84	460
Hornsey—1 and 2, Virginia-villas, f., o.r. £64 p.a.	565
A plot of f. land in Muswell-rd.	305
Clerkenwell—22, Woodbridge-st., u.t. 23 yrs., g.r. £4, r. £55	250
Dalston—8, Downs Pk.-rd., u.t. 77 yrs., g.r. £9 10s., o.r. £50	450
Stamford-hill—1, Market-place, u.t. 80 yrs., g.r. £12. 12s., o.r. £65	350

Oct. 25.—By Baker & Sons.

Romford—1, 2, and 3, Stanley-villas, u.t. 82 yrs., g.r. £17. 17s., r. £78 p.a.	515

By Robson & Perrin.

Catford—2, Brownhill-villas, u.t. 88 yrs., g.r. £6	210

By J. J. Deverell & Co.

Kentish-town—13, Leighton-crescent, u.t. 68 yrs., g.r. £9	440

[*Contractions used in this list.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; yd. for yard, &c.]

MEETINGS.

Saturday, November 2.

Association of Public Sanitary Inspectors.—The chairman (Mr. Hugh Alexander) will deliver his annual address. 6 p.m.

Monday, November 4.

Royal Institute of British Architects.—Opening meeting of the Session. Address by the President, Mr. Alfred Waterhouse, R.A. 8 p.m.

Society of Engineers.—Mr. Samuel Griffin on "Modern Gas-Engine Practice." 7.30 p.m.

Clerks of Works' Association.—Monthly meeting. Paper by Mr. W. Browne, on "The Construction of Theatres" (Carpenters' Hall. 8 p.m.)

Royal Institution.—General Monthly Meeting. 5 p.m.

Liverpool Architectural Society.—Mr. James Dod on "Diagrams illustrating the 'Liverpool Building Act.'" 7 p.m.

Tuesday, November 5.

University College, London.—Mr. Hugh Stannus on "The Distribution and Application of Ornament with Reference to Surface, Material, Construction, and Purpose." IV. 5 p.m.

Society of Biblical Archæology.—The Rev. W. Houghton, M.A., F.L.S., &c., on "The Tree and Fruit Represented by the *Tappûakh* of the Hebrew Scriptures"; and two other papers. 8 p.m.

Glasgow Architectural Association.—Mr. C. M'Intosh on "The Elizabethan Style of Architecture."

Wednesday, November 6.

University College, London (Archæology).—Professor R. S. Poole on "The East in the Middle Ages." (Continued) 5 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary Meeting. 8.30 p.m.

Thursday, November 7.

Builders' Benevolent Institution.—Annual Dinner, at Carpenters' Hall, London Wall. 6 p.m.

Royal Archæological Institute.—(1) Mrs. Tirard on "The Great Sphinx of Egypt, with some account of the Spread of the Sphinx Idea in the Ancient World." (2) The Rev. Greville I. Chester on "Sculptures of Oriental Designs at Bradwardine and Moccas, Herefordshire. 4 p.m.

Saturday, November 9.

Liverpool Architectural Society.—Visit to the new Infirmary (by permission of Mr. Waterhouse, R.A.). 2 p.m.

Miscellanea.

Norwich Cathedral.—We are informed that Mr. John P. Seddon has been appointed by the Committee architect to carry out the "Goulbourn Testimonial Pulpit," which is to be placed in the choir of Norwich Cathedral. It is to be executed by Mr. Harry Hems, of Exeter, in oak, carved to correspond in richness and general treatment with the well-known old oak stall-work of the choir. Mr. Seddon has also recently designed and superintended the erection of the altar-rails in the same cathedral, which were executed by Messrs. Starkie Gardner & Co., of London. These consist of a triangular-sectioned brass rail enriched with enamels, supported on a series of coupled marble columns rising from a marble plinth, and with open-worked brass capitals with blue enamel grounds and brass bases. These columns are grouped in pairs, with quadrupled and tripled groups at the ends. These altar railings were the last work undertaken and paid for by Dean Goulbourn before his resignation of the Deanery of Norwich.

Chimney-shaft Building: Foundation.—A rather high chimney-shaft has just been erected at Messrs. F. S. Hempleman & Co.'s Chemical Works, Rainham, Essex, and forms a prominent landmark on the river side, lying about half-way between the outfall pumping-station at Crossness on the Kent shore, and Purfleet on the Essex shore. We understand that, as might have been expected from the locality of the site, considerable difficulties presented themselves in the foundation, as borings and sinkings proved the strata to be anything but good for such an erection, for they showed 3 ft. of made ground, 4 ft. of loamy clay, 16 ft. of soft peat, 5 ft. of soft clay, and 3 ft. of running sand before ballast was reached. To meet this emergency, the foundation was formed with sixty-nine piles of 12 in. by 12 in. pitch pine, which were driven by a 10 cwt. monkey with 10 ft. fall, into the gravel, until the drive was reduced to an average of about 3-16 in. to the stroke. The piles having been cut off evenly, were braced by 12 in. by 12 in. and 12 in. by 9 in. stringers, and the space between them for a depth of 2 ft., and up to the top of the stringers filled in with Portland cement concrete. Upon this surface, 11 in. by 4 in. and 11 in. by 3 in. Burnettised planks were laid, and then a bed of concrete 40 ft. square and 8 ft. thick. This having been floated up to a perfectly level surface, was left to stand for some weeks, and on being tested was found to be quite even. The height of the chimney is 186 ft., the external measurement at the base 15 ft., and at the cap 7 ft. 6 in., the internal diameter being 9 ft. at the bottom and 6 ft. at the top. The head is built entirely of blue Broseley bricks in cement, and is surmounted by an iron ring cap put together in sections with copper bolts. A 1½ in. by ¼ in. lightning-conductor is fixed. The shaft was built from external scaffolding to a height of 25 ft., and above that from the inside. The weight upon the piles is about 1,300 tons. The whole of the foundations and shaft were designed by and have been executed under the immediate personal supervision of Mr. W. Seckham Witherington, F.R.I.B.A., and the shaft itself was erected by Mr. Joseph Blackburn, of Arkwright-street, Nottingham, with Mr. David Ellis as his foreman of the works.

Berlin a Seaport.—Although the plan of making Berlin a seaport,—as is also proposed for Paris,—is as yet in embryo, it is worthy of some mention. The technical press of Germany has taken up the idea with great enthusiasm, the scheme having been propounded by Vice-Admiral Batsch in an article in the *Deutsche Revue*, proposing a canal from Berlin to the North Sea, available for the largest vessels. The author shows that it would be attended with great difficulties to attempt to connect Berlin with the sea by regulating the course of the river Elbe; but that it would be easy to connect the river Spree and the lower course of the Oder with a canal, which, in fact, partly exists. A glance at the map of Germany will show the feasibility of such a plan. As regards the utility of such a canal, the author values it the higher in view of a completion of the Baltic-North Sea Canal, which will greatly facilitate the import of English goods, particularly iron and coal, to the Baltic ports. It is now necessary, says the Admiral, to give the heart of Germany an outlet to the sea, which would be much cheaper for traffic than railways.

Ashton & Green, Limited.—We are asked to mention that the business hitherto carried on by this Company has been divided into two distinct and separate concerns, the Iron and Marble Department being conducted by Messrs. Wilmer & Hives, under the style of "Ashton & Green Iron Company"; and the Slate Department by Mr. Ernest Mathews, under the style of "Ashton, Green, Mathews, & Co." The last-named branch will be carried on at 13 and 14, Bury-street, St. Mary-axe, London; Temple-gate, Bristol; Farringdon and Bow-bridge Wharves; Stratford; Old Ford; Festiniog, North Wales; and at the various depôts formerly occupied by the Company. This branch of the late Company's business has been under the management of Mr. Mathews since the death of Mr. Ashton in July, 1879. The Ashton & Green Iron Company's business will continue to be carried on at the show-rooms at 11 and 12, Bury-street, St. Mary-axe; 40, Holborn-viaduct; and Temple-gate, Bristol. Mr. Wilmer has for more than ten years managed this part of the late Company's business.

The Carpenters' Company.—The Master and Wardens of the Carpenters' Company entertained a number of gentlemen at dinner at their hall on the 24th ult., to meet those who have assisted the Company in the technical education they have been promoting. The Master (Lieut.-Colonel Banister Fletcher), in proposing the health of "The Examiners," said that it argued well for Englishmen engaged in any professional work that they would devote the large amount of time necessary to examine the work of that institution. It might fairly be asked why the Government did not undertake this work, as was done in France and other foreign countries, where a man could go to a national school, and, without fees, learn everything that might be required to give him technical or other education. One was forced back to the fact that things were more expensive in England than on the Continent, and he doubted whether this country would stand the expense sufficient for the purpose he had indicated. Technical education would also have to rely on voluntary effort, until some future Government could see that in it lay the strength and salvation of the country. The City Companies had come forward nobly to help this work, and all those present would welcome the toast with all heartiness, remembering that the gentlemen referred to in it were laboriously engaged in heavy work, who voluntarily assisted the Company in developing technical education; and he could not conceive how it would have been possible for the Company to have done their work without their voluntary services. Sir Philip Magnus, in reply, congratulated the company on the good work that it had done in advancing technical education. Mr. A. Cates also returned thanks. Mr. A. Preston, in proposing "The Lecturers," said that he was informed that the gentlemen who lectured in that hall to audiences of young artisans and working-men students, numbering from 300 to 700, found them thoroughly appreciative of the subjects that were laid before them.

Building Inspection in Stockholm.—In a recent article in the *Swedish Journal of Building*, a reform of the building law now in force in Stockholm is urged. At present the supervision of building operations is vested in a "Building Board," and the law ordains that the following five notices of building operations are to be given:—1. Before the fundamental excavations are begun. 2. Upon laying the foundations. 3. Upon the completion of the same. 4. When the building is roofed in. 5. When completed. Our contemporary maintains that these regulations are very defective, inasmuch as there is no supervision whatever from the time of laying the foundations and till the house is practically completed, when the Board may, in fact, condemn the whole structure, to the serious detriment of the *entrepreneur*. The journal, therefore, advocates the appointment of a chief inspector, with a staff of sub-inspectors to watch over the work whilst in progress, and proposes the adoption of the following three additional regulations:—1. Technical examination of the drawings of all new buildings, and the rectifying at that stage of all faults of construction. 2. Examination of the site and the proposed foundation. 3. Control during the whole work, so as to see that the proper drawings are followed, and the material used is sound and good. It is proposed to throw the cost of the latter labour upon the builder, it being maintained that this expense, calculated to amount only to about £50 per house, would be gladly borne by the latter in view of the assistance and the guarantee of good workmanship received in return. Moreover, without such a guarantee no one would purchase or advance money upon new house property. The journal concludes by maintaining that an effective control over the building of houses is as necessary and important as, for instance, the control over the sale of drugs. It may be added that an alteration is to be made in the law of building in Sweden, whereby only architects who have passed certain stipulated examinations will be permitted to erect houses.

New Canal in Holland.—The work upon the new canal, which is to connect Amsterdam with the Rhine, is rapidly progressing, and it is anticipated that the canal will be ready in 1891. It is stated that the Government has proposed to the local communes to abolish the canal tolls, and that this will no doubt be carried out. By this step Amsterdam and Zaardam would for the first time obtain free access to the sea.

The English Iron Trade.—As was to be apprehended, speculation has at length seized hold upon the English iron market, and may be said to be rampant this week. Scotch warrants advanced on Monday from 56s. 9d. to 58s. 3d., but on Tuesday the excitement in the ring was the greatest experienced for years. In ten minutes Scotch warrants jumped from the previous night's finish to 60s., buyers standing at 1d. under that price. Makers' iron is quoted from 1s. to 5s. higher, according to brand. The advance of Middlesbrough pig has been 7s. 6d. a ton on the week; and of Bessemer iron in Cumberland and North-west Lancashire, 9s. a ton. In other districts the rise has not been so rapid, but it is very substantial. The excitement in the Glasgow warrant market on Wednesday was very great, and an immense business was done. The effect of the advances in pig-iron upon finished iron and steel has been to send up the former 15s. and the latter 10s. per ton. The business doing in the manufactured products is not large, however, and is restricted to immediate requirements, as makers are so full of work as to be unable to accept further orders at present. Shipbuilding is proceeding most briskly, and while the number of launches is large, new orders are fairly plentiful. There is continued activity in all branches of the engineering trades.—*Iron.*

The Sanitary Ware Trade in the Midland Counties.—We understand that on account of the continued rise in the cost of raw materials and the increase in wages, which have materially increased the cost of manufacture, the Midland manufacturers of sanitary ware have unanimously agreed to lower the discount on their list 5 per cent. on and after the 1st of November. We also understand that a new and revised list of prices for various patterns of chimney-pots made by them will be issued on the same date. Business generally in this branch of trade in the Midlands is very brisk, and many manufacturers have booked orders which will keep them fully employed for several months to come.

The Morley Memorial College for Working Men and Women, adjoining the Victoria Hall, Waterloo-road, has, we hear, begun a very vigorous life. Over 450 students have joined within three weeks of the opening day. In fact, they come in with somewhat embarrassing rapidity, and volunteers (both ladies and gentlemen) are urgently wanted, both to teach classes and act as librarians. Six librarians are wanted to take one evening a week each from 8 to 10.

PRICES CURRENT OF MATERIALS.

TIMBER,	£.	s.	d.	£.	s.	d.
Greenheart, B.G. ....ton	7	0	0	7	15	0
Teak, E.I. ....load	12	0	0	14	0	0
Sequois, U.S. ....foot cube	0	2	3	0	3	0
Ash, Canada ....load	3	10	0	5	0	0
Birch ,, ...load	3	10	0	6	0	0
Elm ,, ...load	4	0	0	5	0	0
Fir, Dantsic, &c. ....load	2	0	0	3	10	0
Oak ,, ...load	2	10	0	4	10	0
Canada ....load	5	10	0	7	10	0
Pine, Canada red ....load	3	0	0	4	0	0
,, yellow ....load	3	10	0	5	5	0
Lath, Dantsic ....fathom	4	10	0	5	10	0
St. Petersburg ....fathom	5	0	0	6	10	0
Wainscot, Riga, &c. ....log	2	15	0	4	5	0
Deals, Finland, 2nd and 1st ...std.	9	0	0	11	0	0
,, ,, 4th and 3rd ....std.	7	0	0	8	15	0
Riga ....std.	7	0	0	9	0	0
St. Petersburg, 1st yellow ....std.	11	0	0	15	0	0
,, 2nd ,, ...std.	10	0	0	11	0	0
,, white ....std.	7	0	0	10	0	0
Swedish ....std.	8	0	0	16	0	0
White Sea ....std.	9	0	0	17	0	0
Canada, Pine, 1st ....std.	16	0	0	36	0	0
,, ,, 2nd ....std.	11	0	0	17	10	0
,, ,, 3rd, &c. ....std.	8	0	0	10	10	0
,, Spruce, 1st ....std.	9	0	0	11	0	0
,, ,, 3rd and 2nd ....std.	7	0	0	9	0	0
New Brunswick, &c. ....std.	6	10	0	8	10	0
Battens, all kinds ....std.	6	0	0	16	0	0
Flooring Boards, sq., 1 in., prepared, First ....sq.	0	11	0	0	14	0
Second ....sq.	0	8	0	0	10	6
Other qualities ....sq.	0	5	6	0	7	9
Cedar, Cuba ....foot	0	0	4½	0	0	5
Honduras, &c. ....foot	0	0	4½	0	0	4½
Mahogany, Cuba ....foot	0	0	4½	0	0	6½
St. Domingo, cargo average ....foot	0	0	4½	0	0	6½
Mexican ,, ...foot	0	0	4½	0	0	5½
Tobasco ,, ...foot	0	0	5½	0	0	6½
Honduras ,, ...foot	0	0	5½	0	0	6½
Box, Turkey ....ton	4	0	0	13	0	0
Rose, Rio ....ton	15	0	0	20	0	0
Bahia ....ton	14	0	0	18	0	0
Satin, St. Domingo ....foot	0	0	6	0	1	0
Porto Rico ....foot	0	0	9	0	1	3
Walnut, Italian ....foot	0	0	4½	0	0	6½
METALS.						
Iron—Pig, in Scotland ....ton	0	0	0	0	0	0
Bar, Welsh, in London ....ton	6	10	0	7	0	0
,, ,, at works in Wales ....ton	6	0	0	6	10	0
,, Staffordshire, in London ....ton	7	10	0	8	0	0

METALS (*continued*).	£.	s.	d.	£.	s.	d.
Copper—						
British, cake and ingot ....ton	47	0	0	48	0	0
Best selected ....ton	49	0	0	49	0	0
Sheets, strong ....ton	58	0	0	0	0	0
Chili, bars ....ton	43	0	0	0	0	0
Yellow Metal ....lb.	0	0	5¼	0	0	5¾
Lead—Pig, Spanish ....ton	12	8	0	0	0	0
English, com. brands ....ton	12	10	0	12	13	6
Sheet, English ....ton	14	0	0	0	0	0
Tin—Straits ....ton	94	0	0	0	0	0
English Ingots ....ton	98	0	0	0	0	0
Zinc—English sheet ....ton	0	0	0	0	0	0

OILS.	£.	s.	d.	£.	s.	d.
Linseed ....ton	20	17	6	21	2	6
Cocoanut, Cochin ....ton	26	15	0	27	0	0
Ceylon ....ton	23	10	0	24	0	0
Palm, Lagos ....ton	28	10	0	0	0	0
Rapeseed, English pale ....ton	31	0	0	0	0	0
,, brown ....ton	29	10	0	0	0	0
Cottonseed, refined ....ton	23	10	0	0	0	0
Tallow and Oleine ....ton	31	0	0	40	0	0
Lubricating, U.S. ....gal.	0	13	0	0	15	0
,, refined ....gal.	0	7	0	0	13	0
Tar—Stockholm ....barrel	1	6	0	0	0	0
Archangel ....barrel	0	15	6	0	15	9

CONTRACTS.

Epitome of Advertisements in this Number.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Roadmaking Works	Tottenham Local Bd.	J. E. Worth	Nov. 5th	ii.
Lime and Cement	Mile End Vestry	J. M. Knight	Nov. 6th	xii.
Lighterage, Regent's Canal	do.	do.	do.	xii.
400 Scaling Ladders	London County Council	*Official*	do.	ii.
Iron Hurdling, Gates, &c.	Met. Asylums Board	do.	Nov. 7th	ii.
Roadway	Trustees of Dr. Edward's & Bishop King's Charity	E. F. Roberts	do.	ii.
Construction of Road	Southport Corporation	*Official*	Nov. 11th	ii.
Tarpaving and Roadmaking	Central London School District	Jarvis & Son	do.	xii.
Lamp Columns	Hendon Local Board	S. S. Grimley	do.	xii.
Broken Granite	Edmonton Local Board	G. E. Eschus	Nov. 12th	xii.
Roadmaking Works	Lewisham Bd. of Wks.	*Official*	do.	xii.
Underground Urinals and Closets	Com. of Sewers	do.	Nov. 15th	ii.
Main Drainage Works	Manchester Corp.	J. Allison	Nov. 25rd	xii.
Stores and Materials	Cheshire Lines Com.	*Official*	Nov. 30th	ii.

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *noon on Thursdays.*]

BECKENHAM (Kent).—For the erection and completion of new parish room, for the building committe of St. Michael's and All Angels, Beckenham. Mr. P. Brown, architect, Anerley, S.E.:—

Syme & Duncan, Beckenham	£825	0	0
J. Smith & Son, South Norwood	797	0	0
Caplen & Redgrave, Waddon Works, Croydon	649	0	0
Reid, Beckenham	646	15	0

BROMLEY (Kent).—For the erection of a boundary wall in Beckenham-lane, for the Bromley School Board. Mr. Hugh S. Cregeen, Surveyor:—

G. H. Lay	£305	0	0
J. L. Woodhams	290	0	0
J. Taylor & Son	275	0	0
J. Podger	275	0	0
E. Peill & Sons	269	0	0
T. Crossley	253	0	0
C. Satchell (accepted)	250	0	0

CHISLEHURST.—For the erection of six cottages at Chislehurst, for Messrs. T. Norfolk & Sons. Mr. Thomas Dinwiddy, architect:—

Otway, Chislehurst	£1,410	0	0
Hall, New Cross	1,124	0	0
Jerrard, Lewisham	1,092	0	0
Kennard Bros., Lewisham	1,080	0	0
Holloway, New Cross	1,078	0	0
Knight, Sidcup	1,047	0	0

CORK.—For additions to Cork Lunatic Asylum. Mr. W. H. Hill, B.E., F.R.I.B.A., architect. Quantities by Messrs. Patterson & Kempster, Dublin:—

B. McMullin, Cork	£23,525	0	0
F. Nunan, Killarney	22,290	0	0
R. W. Johnson, Cork	22,147	0	0
E. & P. O'Flynn, Cork	22,055	0	0
Martin, Belfast	21,903	0	0
Samuel Hill, Military-road, Cork	21,139	0	0

CROYDON.—For the erection of stables and conservatory, Addiscombe-road, for Mr. D. L. Howell. Mr. D. R. Dale, architect:—

Stables.

Hayworth & Son	£767	0	0
J. Smith & Son	717	0	0
Marriage	660	0	0
Hoare & Son (accepted)	598	0	0

Conservatory.

Dashwood & Co.	289	0	0
Weeks & Co.	227	0	0
Hoare & Son (accepted)	220	0	0
Dean & Co. (no lantern)	213	0	0
Marriage	200	0	0

GREAT WAKERING (Essex).—For the erection of a Congregational Chapel, for the building committee. Mr. Charles Fertwee, architect, Chelmsford:—

Wiggins & Burgess, Great Wakering	£774	14	0
W. E. Latch, Braintree	740	0	0
C. E. Orfeur, Colchester (accepted)	690	0	0

KEYHAVEN, MILFORD-ON-SEA (Hants).—For the construction of wharves and dredging to port. Mr. W Charles Evans, F.R.I.B.A., surveyor:—

W. Jannaway, Southampton	£1,700	0	0

LEEDS.—Accepted per schedule of prices, for erecting house, warehouse, &c., Stoney Rock-lane, Leeds. Messrs. Swale & Mitchell, architects, Leeds:—

Mason and Brickwork.—Wm. Shephard.
Joiner.—J. Lindley & Son.
Plumber.—Geo. Rowley.
Plasterer.—J. D. Dakin.
Slater.—T. M. Henryuides.
Painter.—J. T. Thompson.
[All of Leeds.]

LEIGH (Essex).—For building a new residence. Mr. W. Winn, architect, 22, Surrey-street, Strand, W.C.:—

C. E. Orfeur, Colchester (accepted)	£895	0	0

LONDON.—For pulling down and rebuilding "The George and Dragon" and coffee tavern adjoining, St. John-street, Clerkenwell, E.C., for Mr. W. Pierpoint. Mr. H. I. Newton, architect, 49, Victoria-street, Westminster, S.W. Quantities supplied:—

H. Smith & Son, Kensington	£8,967	0	0
Perry & Co., Bow	8,583	0	0
Patman & Fotheringham, Holborn	8,063	0	0
Kirk & Randall, Woolwich	7,900	0	0
J. Beale, Westminster Bridge-road	7,400	0	0
S. Godden, Bryanston-square	7,393	0	0
S. R. Lamble, Kentish Town	7,345	0	0
H. Burman & Sons, Kennington Park	7,295	0	0
G. E. Todd, Hackney	7,295	0	0
Gould & Brand, Camden Town	7,189	0	0
C. Dearing & Son, Essex-road	7,139	0	0
J. Milroy, Baker-street	6,943	0	0
W. L. Kellaway,* Clerkenwell	6,918	0	0

* Accepted.

LONDON.—For alterations and construction of mortuary, *post-mortem* room, carpenters' shop, &c., at the Whitechapel Workhouse, for the Whitechapel Board of Guardians. Mr. Bruce J. Capell, architect, 70, Whitechapel-road:—

Lattee	£430	0	0
Wilson	423	0	0
Neave	394	10	0
Gladding	389	0	0
Cox	389	0	0
Lonsdale	349	0	0
Lusk	340	0	0
Edwards	340	0	0
Hunt	336	0	0
G. Barker	335	0	0
Horey	333	0	0
Lobb & Olver	327	0	0
Bardell	320	0	0
Catmur	318	0	0
Gilbey	316	4	10
Pennack	310	0	0
Robottom	306	10	0
Rolland	297	0	0
Aldridge	290	0	0
Torode	290	0	0
Edmonds	288	0	0
Norberry	273	10	0
Humphreys (withdrawn owing to error)	243	10	0

LONDON.—For alterations to Wellington Club, Islington, for the Salvation Army. Mr. J. Williams Dunford, architect:—

S. Blow	£1,670	0	0
T. Andrew	1,300	0	0
G. Barker	1,179	0	0
Whitehead & Co.	1,099	0	0
Coxhead	1,037	0	0
Bardell	980	0	0
Robson	960	0	0
Martin & Barclay	931	0	0
Channing	877	0	0
Waite	840	0	0
Jarvis	830	0	0
Wood	796	0	0

LONDON.—For alterations to the United Radical Club, Kay-street, Hackney-road, E. Mr. W. Batten, architect:—

Taylor	£1,397	0	0
Sargent	1,277	0	0
Higgs	1,248	0	0
Conisell Bros.	1,016	0	0
Jarvis	960	0	0
Hawkings	931	0	0

LONDON.—For alterations, &c., at the "Merrick Arms," Clapham Junction, S.W. Messrs. W. E. Williams & Son, architects:—

Gregory	£1,447	0	0
Barker	1,335	0	0
Thomerson & Son	1,290	0	0
Todd	1,199	0	0

LONDON.—For building cottages, Hersee-place, Bethnal-green. Mr. W. Batten, architect:—

Higgs	£2,483 0 0
Ames	2,018 10 0
Coulsell Bros.	1,943 0 0
Forest	1,788 0 0
Edwards	1,693 0 0
Hawkings	1,679 0 0
Ling	1,675 0 0
Cooper & Son	1,597 0 0

LONDON.—For building new warehouse, Longfellow-road, for Messrs. Spencer & Co. Mr. C. A. Legg, architect. Quantities by W. Hawker:—

Hearle & Son	£945 0 0
F. & F. J. Wood	895 0 0
Ashby & Horner	881 0 0
S. Salt	830 0 0
S. W. Hawkings	796 0 0
M. Calnan & Co.	793 0 0
Coulsell Bros.	783 0 3

LONDON.—For building four houses, Wadeson-street, Bethnal-green, for Mr. F. Garner. Mr. C. H. Cooper, architect:—

Sharp	£980 0 0
Winkley	955 0 0
A. Hood	932 0 0
Sanson	931 10 0
Hughes	910 0 0
Walker	894 0 0
Jackson	860 0 0
S. W. Hawkings	820 0 0
R. Edwards, jun.	773 0 0

LONDON.—For proposed alterations and additions to Lion House, Stamford-hill, N., for Mr. F. G. A. Roberts. Mr. E. C. Homer, architect:—

Norton & Son	£715 0 0
Green & Lee	697 0 0
Dabbs	629 0 0
Little & Senacle	592 0 0
Staines & Son	589 0 0
Killand	540 0 0

LONDON.—For alterations and shop-fittings at No. 40, Old Bond-street, W., for Messrs. Cooper & Co. Mr. William A. Burr, architect, 65, Chancery-lane, W.C.:—

Langham	£459 0 0
Larke & Son	384 0 0
Stevens Bros., 148, Seven Sisters-road, N. (accepted)	310 0 0

LONDON.—For rebuilding warehouse at Spitalfields, Messrs. Edwards, Son, & Wilkinson, architects:—

Ansell	£666 0 0
Lawrence	665 0 0
Thomerson & Son (accepted)	652 10 0

LONDON.—For making up and paving Blackwater-street, Camberwell, for the Camberwell Vestry. Mr. J. C. Reynolds, surveyor:—

Biggs	£566 14 8
Mowlem	459 18 0
Stowell	426 18 10
W. H. Wheeler	426 1 8
Harris (accepted)	412 3 4

LONDON.—For paving and sewer, New Road, Mile End, for the the Mile End Vestry. Mr. Knight, surveyor:—

Woodham & Fry	£2,189 0 0
Wood	2,122 0 0
Rutley	2,095 0 0
Bell	1,911 0 0
W. H. Wheeler	1,793 0 0
Wood & Co.	1,676 0 0
Jackson (accepted)	1,634 0 0

LYMINGTON (Hants).—For laying-out and draining a new cemetery, constructing a new approach road thereto, erecting entrance-gates, &c. Mr. James Lemon, M. Inst. C.E., engineer, Southampton. Quantities by Mr. John H. Hilliard, surveyor, Southampton:—

R. & C. Rowse, Plymouth	£1,390 0 0
H. Marriott & Co., High Barnet	1,299 0 0
J. Crook, Southampton	1,148 17 0
F. S. Coker, Blackwater, I.W.	1,090 0 0
J. W. Roe & Co., Southampton	1,035 0 0
Jas. Denham, Freshwater, I.W.	998 10 0
E. S. Perkins, Lymington	995 0 0
T. P. Hall, Southsea (accepted)	921 0 0

SOUTHAMPTON.—For alterations to Forest Lodge, Hythe, for Mr. J. Fleuret:—

Pocock & Jelley, Wood Green (accepted)	£531 0 0

SWINDON NEW TOWN.—For the erection of Board Schools in Lethbridge-road, for the Swindon School Board. Mr. Brightwen Binyon, architect. Quantities by Mr. Arthur Field, Ipswich:—

R. R. Facey, Taunton	£5,539 16 9
D. W. Williams, London	4,900 0 0
Geo. Humphreys, Bristol	4,736 12 0
R. Rouse, Plymouth	4,400 0 0
Marriott & Co., High Barnet	4,325 16 8
T. H. Kingerlee, Orford	4,273 0 0
John Reed, Plymouth	4,199 7 0
William Jones, Gloucester	4,180 0 0
H. Flewelling, Wootton Bassett	4,161 0 0
Martin, Maidenhead	4,086 0 0
W. Chambers, New Swindon	4,084 13 6
Grimwood & Sons, Sudbury, Suffolk	3,999 0 0
Buckle & Wheeler, Abingdon	3,998 12 7
J. Williams, Swindon	3,977 0 0
Geo. Wiltshire, Swindon	3,976 0 0
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B. & Son.—H. G. & Son.—B. H.—H. & Co. (the subject is interesting, but not within our scope).—G. M. P. (report received).—R. W. S.—J. A. G.—S. T.—F. C.—B. I.—W. S. W. (thanks).—J. 2. (no space this week).—B. A. W. (we cannot insert your communication).—T. & I. W. (shall have consideration).—S. Frères.—C. E. G. (if the insertion of such items of news be desired, they might at any rate be sent on a clean post-card, and less like a specification inconveniently crowded into the middle of a mass of advertisements, without a bit of margin for editorial corrections or instructions to printers).—G. L. S.—H. H. B.—J. H. M.—H. E. L. (part of your communication omitted owing to its illegibility).—E. P.—H. A. C. (too late for consideration this week).—Manchester Architectural Association (account of meeting late and largely illegible, or a more extended notice of it might have been given.—R. S. D. (too late for attention this week).—J. B. & S. (too late).

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